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Less Than Lethal Force Technologies in Law Enforcement and Correctional Agencies

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Executive Summary

In a recently published book, William Geller and Michael Scott conclude that one of the most promising strategies for controlling the use of deadly force by police is to strengthen "officers' capacities to exercise self-restraint in using deadly force."[1] In their framework, deadly or lethal force is force that is highly likely to result in death or serious physical injury. According to Geller and Scott, self-restraint may be enhanced by several factors including the proper use of less than lethal (LTL) weapons such as batons and chemical sprays. They are not the first authors to call for greater use of LTL weapons. Indeed, every major study of law enforcement's use of deadly force has recommended greater restrictions on deadly force and increased use of less than lethal force.

Police use of force has always been a subject of public debate, but it gained renewed prominence in the public's eye with the beating of Rodney King in Los Angeles, California, and the death of Malice Green in Detroit, Michigan. The beating of Rodney King is probably the most publicized example of police excessive force, generating extensive television coverage and newspaper articles. The riots following the acquittal of the officers involved in the beating of King reflected citizen frustrations about police excessive force and about the criminal justice system. Citizen concerns were ameliorated to an extent by the subsequent convictions and prison sentences of two officers on charges of violating the federal civil rights of Mr. King. In Detroit, the court found two officers guilty of second-degree murder in the November 5, 1992, beating death of Malice Green. A third officer was acquitted of the charge of intent to commit great bodily harm. The beating of Rodney King and the death of Malice Green are deadly force incidents caused by the *misuse* of less than lethal weapons.

When he was chief of police in Houston, Texas, Lee P. Brown implemented a deadly force policy that said, in part, ". . . it is imperative that every effort be made to ensure that such

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[1] William A. Geller and Michael S. Scott, *Deadly Force: What We Know* (Washington: Police Executive Research Forum, 1992). Their complete list for enhancing self-restraint includes personnel selection, counseling, "coaching" by supervisors, violence-reduction training, ancillary equipment (mobile communications, less than lethal weapons, soft body armor, etc.), procedural modifications, and providing officers with timely, tactically useful information (see p. 405).

use [of deadly force] is not only legally warranted but also rational and humane."[2] The development and use of LTL weapons must be held to an equally high standard, since virtually any weapon has the potential to inflict serious bodily injury if used inappropriately.

The need for LTL weapons derives from the fact that law enforcement officers regularly encounter situations that require some type of force, but not deadly force. The most frequent scenarios are close encounters (e.g., breaking up fights and intervening in domestic disputes), flights by suspects, hostage situations, barricades, and crowd control. Officers clearly respond to many situations where LTL force is the appropriate action. It is therefore important that agencies select the most appropriate LTL weapons for their officers, provide the necessary training, and develop clear policies and procedures for weapon use.

The marketplace offers a variety of LTL weapons for purchase. Several types of batons (straight, side-handle, and expandable) are available in varying widths and lengths. Chemical sprays, such as mace and oleoresin capsicum, generally can be purchased in aerosol canisters for attaching to an officer's belt. Electronic stun guns, such as Tasers and Talons, are available for more specialized uses. Many agencies also purchase projectile weapons, such as the Arwen 37mm weapon, for firing smoke canisters, tear gas, and stunning explosives in situations such as hostage situations and barricades.

This report summarizes the results of a grant awarded by the National Institute of Justice (NIJ) to the Institute for Law and Justice (ILJ). The three main purposes of the study were to determine the extent to which LTL weapons have been acquired and used by law enforcement and correctional agencies, identify the legal issues on their use, and assess policies and procedures that control their deployment. To accomplish these aims, ILJ conducted the following activities:

- **Survey of Law Enforcement and Correctional Agencies**. ILJ conducted a survey of police departments, sheriffs departments, jails, and prisons to obtain information on LTL weapons. In total, ILJ received almost 600 completed surveys from these agencies. Topics covered in the survey included number and usage of LTL weapons in the agency, ratings of effectiveness of LTL weapons, training requirements, weapons under consideration for purchase, and weapons discontinued.
- **Case Studies of Selected Agencies**. ILJ visited several law enforcement and correctional agencies to collect more information about LTL weapons. Police and correctional agencies were visited in Arlington County, Virginia; Los Angeles County, California; Dade County, Florida; and Alameda County, California.

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2 Houston Police Department, *Deadly Force Policy,* February 1987.

- **Review of Legal Issues**. ILJ conducted an extensive legal review on both lethal and LTL force. Issues covered in the legal review included liability issues, federal law on deadly force, and legal principles applicable to LTL force.
- **Use of Force Policies**. ILJ reviewed the use of force guidelines developed by two national groups, the Commission on Accreditation for Law Enforcement Agencies (CALEA) and the International Association of Chiefs of Police (IACP). ILJ also analyzed use of force policies obtained from 96 police and sheriffs departments.

The following sections provide a summary of key findings from the study.

Types of LTL Weapons

Over the last 20 years, the variety of LTL weapons has increased substantially. Police departments and correctional agencies now have a range of LTL weapons from which to select. For purposes of this study, we classify LTL weapons into four categories: impact weapons, chemical weapons, electrical weapons, and other LTL weapons. What follows is a brief description of the primary weapons within each category.

Impact Weapons

Impact weapons include batons, flashlights, and other weapons intended for close combat with an individual.

Conventional (straight) batons are the oldest type of LTL weapons found in law enforcement agencies. Straight batons, usually made of hardwood, aluminum, or plastic material, range from one to two inches in diameter and from 12 to 25 inches in length. Longer batons, in the range of 25 to 35 inches, are sometimes called riot batons. For example, a line of officers equipped with riot batons can restrict access to a given area. *Telescoping batons* are compact metal batons which extend into full-length batons. An eight-inch telescoping baton, for example, extends with a flick of the wrist to 21 inches. These batons are usually spring-loaded for expansion. Other common lengths are 6.25 inches (extending to 16 inches) and 9.75 inches (extending to 26 inches).

Side-handle batons are metal or plastic batons that feature a side handle attached at a right angle about six inches from the grip end. Side-handle batons are usually 24 inches long and 1.25 inches in diameter. The grip makes the baton more of a defensive weapon than a conventional baton. Telescoping batons are also manufactured in a side-handle form.

Heavy metal flashlights are usually 15 to 19 inches in length containing four to six flashlight cells. As LTL weapons, they are intended to be used as defensive weapons until other means are available to subdue a combative individual.

Other traditional impact weapons are blackjacks (short leather clubs containing a lead center) and billy clubs (short straight batons, 8 to 16 inches in length).

Chemical Weapons

CN tear gas (the chemical chloroacetophenone is the active agent) and *CS tear gas* (ortho-chlorobenzylidene malononitrile is the active agent) are tear gas products that have been available for over 50 years. They are both chemical irritants that attack the human tearing or lacrimal glands around the eyes, causing watering and partial closing of the eyes. CN and CS products usually come in aerosol canisters about 5 inches high and 1.25 inches in diameter. Officers can carry these canisters on their belts. CN acts quickly, taking between two and five seconds for an effect; CS takes between 20 and 30 seconds. However, CS produces a much more severe effect. One drawback of both CN and CS is that they are ineffective on animals.

OC or Oleoresin Capsicum, a more recently developed product, is an organic extract of the capsicum pepper family. It is packaged in aerosol canisters that contain a mixture of oleoresin capsicum and a carrier such as isopropyl alcohol, water, or a refrigeration agent. The OC concentration (usually between 5 and 5.5 percent) and the type of carrier are the primary determining factors in the effectiveness of the spray. OC canisters are available in several different sizes ranging from small, pocket-size units for non-uniformed personnel to large canisters for correctional facilities and crowd control.

OC spray differs from CN and CS gases because it is an inflammatory agent rather than an irritant. OC usually causes the eyes to close, which is accompanied by coughing and a temporary loss of strength and coordination. It has several advantages over tear gases. It is effective with intoxicated and agitated individuals, and many postal workers carry OC because of its effectiveness on vicious animals. In addition, it has fewer decontamination problems than tear gases.

Tranquilizer darts are a final type of chemical weapon that, as the name conveys, incapacitate through chemically treated darts. Our analysis indicates that tranquilizer darts are rarely found in law enforcement agencies and, when found, always apply to incapacitation of animals.

Electrical Weapons

Electrical weapons are devices that generate a high voltage/low amperage current into a person, thereby causing incapacitation. The two most common electrical weapons are electronic stun weapons and close-range electrical weapons. Both produce a stun or electrical shock effect.

An *electronic stun gun* is a hand-held battery operated device (approximately 9" by 3" by 2") that shoots out two contactors to a distance of approximately 15 feet. The contactors, which affix to a person's skin or clothing, connect with the unit by thin wires. The user controls the person's movement by transmitting electric current through the wires. Stun guns have successfully subdued particularly violent persons on drugs or persons who are mentally deranged. One article documents that in 16 of 19 violent PCP cases in Los Angeles, officers successfully concluded incidents with TASER stun guns, resulting in no injuries to officers or the individuals.[3]

A *close-range electrical weapon* usually is a hand-held device (approximately 4" by 2" by 1") with two small prongs through which an electrical impulse passes. Another type is a glove with a small electric generator that creates an electrical discharge.

Other LTL Weapons

Other weapons considered as LTL weapons include weapons that fire a low-lethality projectile, physical pressure compliance tools, capture nets, and stunning devices.

Low-lethality projectiles launchers are usually single-shot or five-shot weapons with accuracy against targets out to approximately 125 yards. The weapon fires different types of projectiles, including smoke canisters, tear gas canisters, and bean bags (typically filled with pellets). The Arwen 37 millimeter weapon is the most common of this type.

Physical pressure techniques aim at incapacitating an individual by causing pain.[4] The most common type of *physical pressure compliance weapon* is the ORCUTT Police Nunchaku, two twelve-inch plastic handles connected by a four-inch nylon cord. The pain induced by twisting the cord around a limb causes compliance. A variation of the nunchaku is the Kubotan, which has the same basic construction except the cord runs from the middle of one stick to the middle of the other stick.

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[3] Greg Meyer, "Nonlethal Weapons vs. Conventional Police Tactics: Assessing Injuries and Liabilities," *The Police Chief*, August 1992, p. 10-17.

A *capture net* is a polyester net, usually 10 feet by 14 feet, that is cast over a violent person. The net encloses around and entangles the person in a web of strong netting. The netting greatly restricts movement and allows the officers to approach without harm. A capture net requires two to three officers to operate in a safe manner. It has proven particularly effective on persons who are potentially violent because of the effects of drugs such as PCP.

Stunning devices produce a loud bang coupled with a bright light as a diversionary tactic. Police sometimes use hand grenades of this type against armed suspects in a building or closed space, barricaded persons, hostage situations, etc. The grenades, which generate no lethal fragments, aim at distracting or disorienting the suspects.

Some authors expand the range of LTL weapons to include the use of dogs and hand movements (e.g., fists and slaps). For the purposes of this study, we have included only the LTL weapons defined in this section.

Survey Results for Police and Sheriffs Departments

The survey instrument was sent to all 199 counties with populations greater than 250,000 residents and 171 randomly selected counties with populations between 50,000 and 250,000 residents (from a total of 643 counties). Within each county, the largest city's police department received a survey to complete, and the county sheriff's department received a survey if the sheriff had law enforcement responsibilities.[5] In total, ILJ mailed 370 surveys to police chiefs and 314 surveys to sheriffs. Two hundred and twenty-eight police departments and 150 sheriffs departments returned surveys (61.6 percent and 47.8 percent response rates, respectively).

Exhibit 1 gives the number of sampled departments reporting different types of LTL weapons. Impact weapons dominate, with 93 percent of the departments reporting at least one type of impact weapon available. Fifty-seven percent have side-handle batons and 51 percent have conventional batons. Forty percent report having telescoping batons, reflecting increased popularity of this more recently developed weapon. Many departments report having more than

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4 These techniques also include manual procedures such as pressing on pressure points and twisting a person's arm. Manual techniques are not a part of this study because our emphasis is on weapons.

5 In most states, the sheriff in a county has responsibilities for law enforcement duties, such as responding tc citizen calls and investigating crimes, either in the entire county or in its unincorporated areas. However, in a few states, such as Nevada, New Hampshire, North Dakota, and Pennsylvania, the sheriff has only jail and court security responsibilities with no law enforcement duties. Sheriffs in these states did not receive a law enforcement survey, but they did receive a jail survey if they were in the sampled counties.

one baton type, with 47 departments (12.4 percent) issuing all three types. Interestingly, 38 departments (10.1 percent) stated that they do not purchase batons.

Chemical weapons are the second most frequently acquired LTL weapon and are available in 71 percent of the police departments and 65 percent of the sheriffs departments. Oleoresin capsicum (OC) sprays lead the way (41 percent of departments), followed by CN sprays in 33 percent of the departments and CS sprays in 26 percent of the departments. One hundred departments (26.5 percent) marked more than one type of spray, but 132 departments (35.0 percent) do not issue any sprays.

The availability of electrical weapons and other LTL weapons is much more limited than either impact or chemical weapons. Only 16 percent of the departments state they have electronic stun devices (usually tasers), and only 19 percent have weapons for firing low-lethality projectiles (usually Arwen 37mm rifles). Stunning explosives are more common, as reported by 37 percent of the departments.

Respondents were asked to provide the first year of acquisition for each weapon. This information was used to calculate an *average year of acquisition*, as shown in Exhibit 1. Some LTL weapons, such as conventional batons and CN/CS sprays, have been around for decades (one department reported 1902 for its initial purchase of batons). Departments purchased other types of weapons, such as electronic stun weapons and stunning explosives, during the 1980s. A large majority (72 percent) of departments with electronic stun weapons report initial purchases during these years. Similarly, 69 percent of departments with stunning explosives gave the 1980s as the initial acquisition period. In contrast, telescoping batons were generally purchased between 1990 and 1992. This is an expected result, since these batons first appeared commercially around 1988. Similarly, since OC spray came on the market about 1990, an average acquisition year of 1991 is not surprising; 41 percent of departments with OC spray gave 1992 as the initial acquisition year.[6]

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[6] We found no major differences between police and sheriffs departments regarding average years of acquisition. Similarly, we found virtually no differences based on population size.

Exhibit 1
Prevalence of LTL Weapons
Police and Sheriffs Departments

	Results from Sampled Departments					Estimates for All Departments			
	Police Depts. (n=228)		Sheriffs Depts. (n=150)		Average Year of	Police Depts. (N=842)		Sheriffs Depts. (N=781)	
Impact Weapons	No.	Percent	No.	Percent	Acquisition	No.	Percent	No.	Percent
Conventional Batons	131	57.5	60	40.0	1967	485	57.6	281	36.0
Side-Handle Batons	129	56.6	85	56.7	1984	487	57.9	488	62.5
Telescoping Batons	91	39.9	59	39.3	1990	367	43.6	258	33.0
Heavy Metal Flashlights	76	33.3	54	36.0	1979	327	38.9	309	39.6
Close-Range Impact Weapons	2	0.1	10	6.7	1958	74	8.8	41	5.2
Other Impact Weapons	16	7.0	10	6.7	1983	50	5.9	57	7.4
Departments with Impact Weapons	**214**	**93.9**	**139**	**92.7**		**780**	**92.6**	**727**	**93.0**
Chemical Weapons									
Chemical Irritant Sprays/CN	79	34.6	44	29.3	1974	273	32.4	223	28.6
Chemical Irritant Sprays/CS	61	26.8	39	26.0	1975	200	23.8	199	25.4
Oleoresin Capsicum (OC) Sprays	93	40.8	62	41.3	1991	352	41.8	318	40.7
Systemic Chemical Agent (tranquilizer darts)	4	1.8	1	.7	1976	6	.8	3	.3
Other Chemical Weapons	23	10.1	10	6.7	1984	89	10.5	42	5.4
Departments with Chemical Weapons	**161**	**70.6**	**97**	**64.7**		**580**	**68.9**	**487**	**62.4**
Electrical Weapons									
Electronic Stun Weapons	35	15.4	25	16.7	1985	95	11.2	140	17.9
Close-Range Electrical Weapons	15	6.6	16	10.7	1986	59	7.0	77	9.8
Other Electrical Weapons	8	3.5	12	8.0	1986	35	4.1	70	9.0
Departments with Electrical Weapons	**49**	**21.5**	**46**	**30.7**		**165**	**19.6**	**254**	**32.5**
Other LTL Weapons									
Weapons for Low-Lethality Projectiles	42	18.4	33	22.0	1980	150	17.8	162	20.8
Physical Pressure Compliance Tools	10	4.4	8	5.3	1986	36	4.2	35	4.5
Stunning Explosives	89	39.0	49	32.7	1987	307	36.5	209	26.7
Other LTL Weapons	13	5.7	11	7.3	1985	36	4.3	54	6.9
Departments with Other Weapons	**117**	**51.3**	**70**	**46.7**		**403**	**47.9**	**346**	**44.3**

Exhibit 2 expands the information on LTL weapons to include the number of units issued per 100 sworn personnel. The most frequently issued LTL weapons are conventional batons (65.4 units per 100 sworn), flashlights (68.5), side-handle batons (63.7), CN sprays (59.8), and OC sprays (53.9) . These figures reflect the previous result that many departments have more than one type of impact and chemical weapons. In some departments, there has been a change from one type of weapon to another, for example, from CN to OC spray; in other departments, each officer can select a type of baton or spray.

About 20 percent of the departments with batons or sprays issue these weapons to *all* sworn personnel, while the remaining 80 percent issue to selected groups. For example, some departments issue batons to all patrol personnel, but not to traffic officers, desk officers, and detectives. Issuance is, of course, a policy decision within each department.

Not only do electrical and other LTL weapons appear less frequently among departments, there are also fewer units per sworn personnel. Exhibit 2 shows that electronic stun weapons are in 16 percent of the departments, with 7.0 units per 100 sworn personnel. Weapons for firing projectiles are in 20 percent of the departments, with 3.2 units per 100 sworn personnel. These low numbers reflect the fact that departments issue these weapons to specialized units, such as SWAT teams, rather than to all patrol officers. They are intended for special situations, such as hostage situations, barricades, and subduing violent individuals.

Respondents were asked to rate each LTL weapon on four dimensions of effectiveness: effectiveness in subduing suspects, potential for citizen complaints, officer safety, and public safety. They scored each dimension from 1 to 5, with higher scores indicating greater effectiveness. In Exhibit 2, we see that OC sprays receive the most favorable average ratings at 4.4 for subduing suspects, 4.5 for citizen complaints, 4.3 for officer safety, and 4.5 for public safety. Flashlights receive the lowest ratings at 3.2 for subduing suspects, 3.1 for citizen complaints, 3.4 for officer safety, and 2.8 for public safety. Overall conclusions from the effectiveness averages are as follows:

- Side-handle and telescoping batons are more effective than conventional batons or flashlights.
- OC sprays are more effective than CN or CS sprays.
- Projectile weapons and stunning devices have high averages for subduing suspects, citizen complaints, and officer safety, but lower scores than most other weapons for public safety.

Exhibit 2
LTL Weapon Usage and Effectiveness
Police and Sheriffs Departments

	Number of Depts.	Percent (n=378)	Units Per 100 Sworn	Annual Uses Per Unit	Effectiveness Ratings of LTL Weapons: Subduing Suspects	Citizen Complaints	Officer Safety	Public Safety
Impact Weapons								
Conventional Batons	191	50.5	65.4	.42	3.5	3.5	3.5	3.3
Side-Handle Batons	214	56.6	63.7	.33	3.8	3.8	3.9	3.6
Telescoping Batons	150	39.7	37.4	.43	3.9	4.2	3.9	3.6
Heavy Metal Flashlights	130	34.4	68.5	.23	3.2	3.1	3.4	2.8
Chemical Weapons								
Chemical Irritant Sprays/CN	123	32.5	59.8	.28	3.3	4.0	3.3	3.6
Chemical Irritant Sprays/CS	100	26.5	44.8	.28	3.7	3.9	3.6	3.7
Oleoresin Capsicum (OC) Sprays	155	41.0	53.9	.74	4.4	4.5	4.3	4.5
Electrical Weapons								
Electronic Stun Weapons	60	15.9	7.0	1.58	3.6	4.4	3.9	4.2
Close-Range Electrical Weapons	31	8.2	16.2	1.06	3.1	4.1	3.0	3.9
Other LTL Weapons								
Weapons for Low-Lethality Projectiles	75	19.8	3.2	.89	4.1	4.5	4.4	3.5
Stunning Explosives	138	36.5	14.9	.87	4.6	4.5	4.2	3.7

NOTE: For effectiveness ratings, the scales were as follows:
Effectiveness in subduing suspects: Very Ineffective (1) to Very Effective (5)
Citizen complaints: Most Complaints (1) to Fewest Complaints (5)
Officer safety and public safety: Very Unsafe (1) to Very Safe (5)

The amount of training required for LTL weapons is a concern for police and sheriffs departments. Recruit training classes always include hours for proper use of lethal and LTL weapons. Most departments require annual retraining for all sworn personnel. Manufacturers of LTL weapons also provide training, particularly when departments first acquire the weapons. As seen in Exhibit 3, impact weapons require the highest amount of training, averaging over 11 hours for recruit training and 5 hours for annual retraining. Manufacturers' training time averages 9 hours for conventional batons, 18 hours for side-handle batons, and 11 hours for telescoping batons. Chemical weapons require less training, about 5 hours for recruit training, 5 hours for annual retraining, and 11 hours for training provided by manufacturers.

Exhibit 3
Training for LTL Weapons
Police and Sheriffs Departments

	Recruit Training Hours	Annual Retraining Hours	Mfg. Rep. Training Hours
Impact Weapons			
Conventional Batons	13.3	5.5	9.2
Side-Handle Batons	14.9	5.4	18.0
Telescoping Batons	11.8	5.3	11.1
Heavy Metal Flashlights	10.9	4.6	10.0
Chemical Weapons			
Chemical Irritant Sprays/CN	5.2	4.4	10.0
Chemical Irritant Sprays/CS	4.6	5.7	14.1
Oleoresin Capsicum (OC) Sprays	3.6	3.6	11.6
Electrical Weapons			
Electronic Stun Weapons	4.5	6.3	15.0
Close-Range Electrical Weapons	6.0	5.3	8.0
Other LTL Weapons			
Weapons for Low-Lethality Projectiles	5.2	8.2	17.5
Stunning Explosives	10.1	6.9	16.3

Legal Issues

The single most important legal issue for law enforcement administrators, correctional administrators, and public managers continues to be liability from the misuse of LTL weapons. Guidance on legal liability is needed at several levels:

- Law enforcement and correctional officers require guidance on when and how to use LTL weapons to avoid unintentional injuries.
- Law enforcement and correctional supervisory personnel require guidance on the best ways to direct and train line personnel in the use of LTL weapons and how best to monitor their use.
- Law enforcement and correctional managers require guidance in setting policy about the adoption and use of LTL weapons.
- Municipal and state governmental bodies require the same policy guidance as managers, but also need information on the value of earmarking appropriations for LTL weapons. These governments may be ultimately responsible for the outcomes of the use and misuses of LTL weapons.

At each of these levels, the fear of potential legal liability can inhibit the adoption or use of LTL weapons.

An irony of improvements in existing LTL weapons and introduction of new LTL weapons is that the number of liability cases may increase unless agencies and municipalities take appropriate actions. More incidents involving LTL weapons are likely as a result of improved ease of use and improved safety of these weapons. More opportunities therefore exist for misuses of these weapons, which may, in turn, result in liability cases. Liabilities associated with LTL weapons can be decreased through (1) a planned and gradual transition to LTL weapons, (2) a strong training program, (3) an emphasis on appropriate policies, and (4) guidance from the agency's local legal advisor.

Use of Force Policies

As part of this project, ILJ staff reviewed use of force policies from 96 police and sheriffs departments. Some policy statements came from survey respondents. Others are from departments accredited through the process offered by the Commission for Accreditation of Law Enforcement Agencies (CALEA). Therefore, the policies are a *convenience* sample, rather than a *randomly selected* sample. The review offers an opportunity to see how departments have addressed difficult issues in their use of force policies. Some departments have followed the CALEA standards very closely, even to the extent of referencing specific standards within policy

statements. Other departments have adapted the IACP model policy to satisfy state laws and reflect local policing philosophies. Still other departments have developed policy statements that do not resemble either of these models.

Exhibit 4 summarizes the number of departments from our sample that include provisions for several key topics. Virtually all departments provide policy statements about use of force and list the lethal and LTL weapons authorized for use by officers. Fewer departments provide guidelines on avoiding excessive force, on specifying unauthorized weapons, and on arranging for medical aid.

Exhibit 4
Summary of Policy Analysis
(n=96)

Policy Area	Number with Policy Area	Percent
Policy Purpose	87	90.6
Definition of LTL Force	46	47.9
List of Authorized Weapons	93	96.9
List of Unauthorized Weapons	44	45.8
Training Requirements	60	62.5
Avoiding Excessive Force	49	51.0
Medical Treatment	32	33.3
Reporting Requirements	70	72.9

Several trends in the policy statements should be highlighted in this summary as they relate to LTL force. For example, the following statement from a policy expands the concept of lethal force to recognize that LTL weapons can cause lethal force:

> Lethal force shall mean force used with the purpose of causing, or which will create a substantial risk of causing, death or serious bodily harm. The discharge of a firearm will be considered to be use of lethal force, however, *lethal force can also be expanded to include the use of nonlethal weapons and force, if the intent in their use is to cause serious physical injury*. [Italics added.]

Several policies include the CALEA definition for *serious physical injury*: "a bodily injury that creates a substantial risk of death; causes serious, permanent disfigurement; or results in long-term loss or impairment of the functioning of any bodily member or organ."

Some policies also expand the definition of LTL force. One department divides LTL force into *restraining force*, *physical force*, and *defensive force*, with the following definitions:

> Restraining force: Force limited to holding and restraining persons, including but not limited to, armlock and take-down holds, but not including carotid artery holds.
>
> Physical force: Pain-inflicting submission holds to overcome resistance to arrest.
>
> Defensive force: Physical battery with hands, fists, defensive equipment to overcome violent resistance or to protect self or others from assault or injury.

The policy states that LTL force includes the use of LTL weapons in any of the above ways.

Another important area reviewed concerned excessive use of force. The CALEA standards and the IACP model policy include statements about minimizing the force necessary for an incident. CALEA standard 1.3.1 requires a written directive stating that personnel "will use only the force necessary to effect lawful objectives." The IACP policy says that "police officers shall use only that force that is reasonably necessary to effectively bring an incident under control, while protecting the lives of the officer or another."

About half the policies went beyond these basic requirements to include specific statements on avoiding excessive force with LTL weapons. A general statement from one policy reads as follows:

> The force used shall be no greater than is necessary and reasonable in a given situation. *The amount and degree of force which may be employed will be determined by the surrounding circumstances including, but not limited to*: (a) the nature of the offense; (b) the behavior of the subject against whom force is to be used; (c) actions by third parties who may be present; (d) physical odds against the officer; and (e) the feasibility or availability of alternative actions. [Italics added.]

Another policy gave specific guidelines on when not to use chemical mace:

> Chemical mace will *not* be used for the following:
>
> a. As a threat to make a person comply with an officer's verbal order when no physical violence is imminent.
> b. To elicit information from a person.
> c. As retaliation for verbal or physical abuse.

Because of the Rodney King incident in Los Angeles and other incidents involving batons, we can expect stronger policy statements about use of excessive force. In addition, many

departments are switching from CN/CS sprays to OC sprays. These departments may experience more applications of chemical sprays simply because the OC sprays have fewer contamination problems than CN/CS sprays. As a result, departments with chemical sprays may expand their policies to ensure that these sprays are not misused.

Conclusions and Recommendations

LTL Weapons Technology Has Improved

There is no doubt that many improvements have taken place in weapons technology over the last 20 years. One key example highlights the changes. The recently developed OC sprays have three primary advantages over CN/CS mace products. First, OC is effective on individuals who are intoxicated or high on drugs. In the past, assaults on officers have occurred because CN/CS failed to have any noticeable effect on these individuals. While no statistics are available, our interviews with agencies issuing OC indicate that their officers are experiencing fewer attacks. Secondly, OC is effective with vicious animals. Officers interviewed during our site visits indicated successful use of OC against attacking dogs. Thirdly, OC presents few decontamination problems. In the past, some officers have been reluctant to use mace because of the effort and problems associated with decontaminating themselves and the affected individuals.

Departments Are Changing to OC Sprays

Our surveys confirm that many law enforcement and correctional agencies are in the process of obtaining OC sprays. OC is the first chemical spray adopted by some departments, while others are switching from CN/CS to OC. Greater effectiveness of OC and fewer decontamination problems drive the change.

The IACP is currently conducting a study funded by NIJ to examine OC in more detail. The Baltimore County, Maryland, Police Department, which previously issued no chemical agents, is serving as the test site. Results from the study will provide information on the individual's behavior at the time of the encounter (calm, intoxicated, drugged, etc.), what type of force (if any) was applied against the officer, and whether injuries occurred. OC applications against animals will also be recorded. The results should provide further insight into the acquisition, training, and use of OC. Favorable results from the study will undoubtedly create more impetus for departments to adopt OC.

Improved LTL Weapons Should Be Developed

Even though progress has been made in LTL weapon technology, improvements are still needed. The Science and Technology Division of NIJ has launched a major effort to develop improved LTL weapons and related technologies to deal with violent and uncooperative behavior. The Division is exploring pulsating disorienting lights with special goggles for officers, entanglement devices, technologies to stop fleeing vehicles, airbag restraint systems for rear seats of patrol cars, sticky foam, and a velocity controlled, blunt projectile launcher. Under the Division's established criteria for improvement, any new technology must satisfy several user requirements. A new technology must:

- Serve a real need
- Improve on current practice
- Not overburden the officer
- Not be prohibitively expensive
- Not require extensive training
- Not involve dedicated manpower
- Involve manageable liability questions

If successful, the technologies under consideration will alleviate several drawbacks of currently available weapons. For example, sticky foam may address many of the criticisms of electronic stun guns. Allegations against the Taser have been that it is not effective against someone wearing heavy clothes and that the electrical spark can cause scars or burn marks. The foam may be as effective as the Taser with fewer problems.

Departments Can Limit Liability

Police and sheriffs departments can limit liability by carefully considered choices of LTL weapons, well crafted policies and procedures, and exemplary training programs grounded in defensive tactics. In addition, agencies should acknowledge that excessive force incidents can and do occur. Procedures should be established to investigate and act upon all excessive force incidents. Officers repeatedly accused of involvement in excessive force incidents should be identified and disciplined. In addition, steps should be taken to assist these officers by transferring them to duties that require limited public contact; counseling them on their duty to minimize force; referring them to an employee assistance program; providing them with training in cultural diversity or other appropriate training; or some combination of these actions.

Policies and Procedures Need Improvement

Our analysis of use of force policies identified both strengths and weaknesses. The guidelines established by CALEA and the IACP are clearly an excellent starting point for departments in formulating their policies. Both organizations support the expansion of their guidelines to satisfy state laws and reflect local policing philosophies. Virtually all the policies we reviewed contain clear statements about using only the amount of force necessary for a situation, and most policies list the lethal and LTL weapons authorized for use by officers. We found, however, that many policies were weak in highlighting the importance of the policy and encouraging strict adherence to policy provisions. Many policies also fail to provide adequate guidelines on avoiding excessive force, on specifying unauthorized weapons, and on arranging for medical aid.

A National Database on Excessive Force Should Be Developed

Several leading researchers, practitioners, and interest groups have expressed support for a national database system to gather information about police use of force. Geller and Scott note "It is striking that, despite substantial advances made over the past several decades in police telecommunications systems and automated data processing networks, the United States does not have a reliable database that reports precisely how many people are killed, let alone wounded or shot at but missed, by the police nationwide."[7] Sherman and Cohn call for a "national system of reporting all deaths caused by law enforcement officers, for whatever reason, at whatever location, whether on duty or off."[8] Americans for Effective Law Enforcement, Inc., calls for a broader system that would minimally include "the number of citizens versus officer complaints, by type of allegation; number of officer versus officer complaints, by type; disposition of complaints by percentage, for each type of allegation; number of times officers have resorted to lethal and nonlethal weapons to defend themselves and/or overcome resistance."[9] This organization recommends collection of data through the Federal Bureau of Investigation's existing Uniform Crime Report system.

If a national database is established, it should include both lethal and LTL force incidents. Many departments now have policies calling for a written report on all LTL force incidents,

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7 Geller and Scott, p. 46.

8 Lawrence W. Sherman and Ellen G. Cohn, with Patrick R. Gartin, Edwin E. Hamilton, and Dennis P. Rogan. *Citizens Killed by Big City Police, 1970-1984* (Washington, D.C.: Crime Control Institute, 1986).

9 Reported in Geller and Scott, p. 46.

regardless of the extent of injury. Our view is that more departments will adopt mandatory reporting. It should therefore be relatively easy for departments to provide information to the national database on all incidents. More detailed information needs to be submitted on incidents resulting in injury to an officer or to affected individuals.

Chapter 1

Introduction

In a recently published book, William Geller and Michael Scott conclude that one of the most promising strategies for controlling the use of deadly force by police is to strengthen "officers' capacities to exercise self-restraint in using deadly force."[1] In their framework, deadly or lethal force is force that is highly likely to result in death or serious physical injury. According to Geller and Scott, self-restraint may be enhanced by several factors including the proper use of less than lethal weapons such as batons and chemical sprays. They are not the first authors to call for greater use of less than lethal weapons. Indeed, every major study of law enforcement's use of deadly force has recommended greater restrictions on deadly force and increased use of less than lethal force.

Police use of force has always been a subject of public debate, but it gained renewed prominence in the public's eye with the beating of Rodney King in Los Angeles, California, and the death of Malice Green in Detroit, Michigan. The beating of Rodney King is probably the most publicized example of police excessive force, generating extensive television coverage and newspaper articles. The riots following the acquittal of the officers involved in the beating of King reflected citizen frustrations about police excessive force and about the criminal justice system. Citizen concerns were ameliorated to an extent by the subsequent convictions and prison sentences of two officers on charges of violating the federal civil rights of Mr. King. In Detroit, the court found two officers guilty of second-degree murder in the November 5, 1992, beating death of Malice Green. A third officer was acquitted of the charge of intent to commit great bodily harm. The beating of Rodney King and the death of Malice Green are deadly force incidents caused by the *misuse* of less than lethal weapons.

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[1] William A. Geller and Michael S. Scott, *Deadly Force: What We Know* (Washington:Police Executive Research Forum, 1992). Their complete list for enhancing self-restraint includes personnel selection, counseling, "coaching" by supervisors, violence-reduction training, ancillary equipment (mobile communications, less than lethal weapons, soft body armor, etc.), procedural modifications, and providing officers with timely, tactically useful information (see p. 405).

When he was chief of police in Houston, Texas, Lee P. Brown implemented a deadly force policy that said, in part, ". . . it is imperative that every effort be made to ensure that such use [of deadly force] is not only legally warranted but also rational and humane."[2] The development and use of less than lethal weapons must be held to an equally high standard, since virtually any weapon has the potential to inflict serious bodily injury if used inappropriately.

The need for less than lethal weaponry derives from the fact that law enforcement officers regularly encounter situations that require some type of force, but not deadly force. The most frequent scenarios are close encounters (e.g., breaking up fights and intervening in domestic disputes), flights by suspects, hostage situations, barricades, and crowd control. Officers clearly respond to many situations where less than lethal force is the appropriate action. It is therefore important that agencies select the most appropriate less than lethal weapons for their officers, provide the necessary training, and develop clear policies and procedures for weapon use.

The marketplace offers a variety of less than lethal weapons for purchase. Several types of batons (straight, side-handle, and expandable) are available in varying widths and lengths. Chemical sprays, such as mace and oleoresin capsicum, generally can be purchased in aerosol canisters for attaching to an officer's belt. Electronic stun guns, such as Tasers and Talons, are available for more specialized uses. Many agencies also purchase projectile weapons, such as the Arwen 37mm weapon, for firing smoke canisters, tear gas, and stunning explosives in situations such as hostage situations and barricades. Despite these trends, however, no information had been developed about the number of agencies nationwide that have purchased each type of weapon, the number of uses of these weapons, or the types of weapons that have been tried and discontinued. Further, no study had taken a close look at department policies and procedures on less than lethal force or the legal issues associated with less than lethal force.

This report is the result of a grant awarded by the National Institute of Justice (NIJ) to the Institute for Law and Justice (ILJ). The three main purposes of this study were to determine the extent to which less than lethal weapons have been acquired and used by law enforcement and correctional agencies, identify the legal issues on their use, and assess policies and procedures that control their deployment. To accomplish these aims, we conducted the following activities:

- **Survey of Law Enforcement and Correctional Agencies**. ILJ conducted a survey of police departments, sheriffs departments, jails, and prisons to obtain information on less than lethal weapons. In total, we received almost 600 completed surveys from these agencies. Topics covered in the survey included:

  - Number of less than lethal weapons available in the agency
  - Number of uses of less than lethal weapons
  - Ratings of effectiveness of the weapons

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2 Houston Police Department, *Deadly Force Policy,* February 1987.

- Training and retraining requirements for less than lethal weapons
- Weapons under consideration for purchase
- Weapons discontinued in the last five years
- Weapons involved in internal affairs investigations and litigation

- **Case Studies of Selected Agencies**. ILJ visited several law enforcement and correctional agencies to collect more specific information about less than lethal weapons, including weapons usage, policies, training, citizen complaints, and effectiveness. The agencies visited were the following:

  - Arlington County, Virginia
    Arlington County Police Department
    Arlington County Sheriff's Department
  - Los Angeles County, California, Sheriff's Department of Field Operations
    Custody Division
    Field Operations Regions
  - Dade County, Florida
    Metro-Dade Police Department
    Metro-Dade County Corrections and Rehabilitation Department
  - Alameda County, California, Sheriff's Department
    Law Enforcement Division
    Detention and Corrections Division

- **Information from Manufacturers**. Approximately 15 manufacturers of less than lethal weapons provided ILJ with detailed specifications about their products. From these descriptions, ILJ was able to develop an accurate picture of currently available weapons.

- **Review of Legal Issues**. ILJ conducted an extensive legal review on both lethal and less than lethal force. Issues covered in the legal review included the following:

  - Liability issues for officers, supervisors, agency, and local government
  - Federal laws on deadly force
  - Legal principles applicable to less than lethal force

- **Use of Force Policies.** ILJ reviewed the use of force guidelines developed by two national groups, the Commission on Accreditation for Law Enforcement Agencies (CALEA) and the International Association of Chiefs of Police (IACP). We also analyzed use of force policies obtained from 96 police and sheriffs departments. Topics for the review were:

  - Policy purpose
  - Definitions of lethal and less than lethal force
  - Lists of authorized and unauthorized weapons
  - Training requirements
  - Avoiding excessive force

- Medical aid
- Reporting requirements

Chapter 2 of this report presents a history of less than lethal weapons, and Chapter 3 gives the results of our surveys of law enforcement and correctional agencies. The next three chapters describe the results of our site visits, summarize the legal issues on less than lethal weapons, and give the analysis of use of force policies. The last chapter discusses what is likely to happen in the future with less than lethal weapons.

Less than lethal force is the subject of several other studies currently underway with NIJ funding. The IACP is studying the use of chemical sprays in law enforcement agencies. The National Sheriffs' Association is conducting a detailed study of new less than lethal weapons in jails and patrol situations. The Police Foundation is analyzing encounters between police and citizens to aid development of less than lethal technologies, and the American Correctional Association is looking at the application of new less than lethal technologies in correctional agencies. In addition, four Department of Energy National Laboratories are exploring new less than lethal technologies for application in law enforcement and corrections situations. Finally, under a grant from NIJ, Burkhalter Associates, Inc., has established a senior panel of nationally recognized representatives from the public service arena, federal and local law enforcement agencies, and federal defense agencies. The panel is examining a variety of issues related to the application of science and technology to law enforcement and corrections, and particularly to less than lethal technologies. In summary, NIJ has made a major commitment to advance the state of the art in less than lethal technologies.[3]

This study could not have been completed without the assistance of a distinguished Advisory Board, which met at the start of the project to offer advice on the conduct of the tasks. The Advisory Board was comprised of the following persons:

Steven C. Bishop
Chief of Police
Kansas City, Missouri

David W. Hayeslip
Program Manager
National Institute of Justice

James E. Murphy
Consultant
American Correctional Association

Patrick J. Sullivan, Jr.
Sheriff
Arapahoe County, Colorado

Jeffrey Washington
Administrator
Standards and Accreditation
American Correctional Association

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[3] Some authors have a definition of less than lethal force that includes verbal techniques, use of hands and fists, and canines. Our study intentionally excludes these because the primary focus of the NIJ program is on development and improvement of weapon technologies.

We would also like to acknowledge the support and direction provided by David Boyd, Director, Science and Technology Division, National Institute of Justice, and Raymond Downs, Program Manager, Science and Technology Division. They provided several opportunities for us to discuss the direction of this project with other researchers and also made suggestions on the content of the final report.

Finally, the authors would like to thank several other staff members of ILJ for their contributions to this report. Peter Ohlhausen, ILJ consultant, prepared the initial draft on the background of less than lethal weapons and descriptions of the different types of weapons. Neal Miller and Edward Connors developed an extensive analysis of the legal issues surrounding less than lethal weapons, including a summary of these issues in Chapter 5. Finally, Barbara Webster and Joan Peterschmidt provided excellent support in the final editing of the report.

Chapter 2

Background on Less Than Lethal Weapons

What exactly are less than lethal weapons? The literature offers almost as many definitions as articles, but two recent definitions are worthy of comment. A report from an Attorney General's conference defines LTL weapons as "devices or agents used to induce compliance with law enforcement without substantial risk of permanent injury or death to the subject."[1] A report from British Columbia describes a "less than lethal force option" as a force option that is "*highly unlikely* to cause death or serious injury to a suspect when *properly applied* by a police officer."[2] The term "highly unlikely" means that it is possible, but highly improbable, that the option would cause death or serious injury, and the term "properly applied" conveys the importance of training.

Examination of these two definitions reveals common elements. Both indicate that the aim of employing an LTL weapon is to obtain an individual's compliance. A police officer may want to make an arrest, prevent an individual from harming others, or control an incident before it escalates. A correctional officer may need to stop a fight or subdue an individual in a cell. The definitions correctly state that LTL weapons may cause pain, and sometimes injury, to obtain compliance. The intent is to minimize the possibility of serious or permanent injury. Finally, both definitions imply the need for training in the proper application of LTL weapons.

The term "less than lethal" is, of course, a relative term. It stands in contrast with "lethal" or "deadly" force that is "reasonably capable of causing death or great bodily harm."[3] Lethal force applies to the use of firearms, vehicle pursuits, and other force options with high likelihood of substantial injuries. As the British Columbia report states, however, no weapon is "100

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1 Sherri Sweetman, *Report on the Attorney General's Conference on Less Than Lethal Weapons* (Washington: National Institute of Justice, 1987), p. 2.

2 J. P. Jamieson, R. Hull, and P. Battershill, *Recommendations of the Committee on the Use of Less than Lethal Force by Police Officers in British Columbia* (British Columbia Police Commission, July 1990), p. 13.

3 William A. Geller and Michael S. Scott, *Deadly Force: What We Know* (Washington: Police Executive Research Forum, 1992), p. 23.

percent less than lethal 100 percent of the time."[4] An earlier report notes, "All weapons, and a wide variety of objects that are not intended to serve as weapons, create some primary or secondary risk of permanent injury."[5] While the term "non-lethal" appears in many articles, "less than lethal" is more appropriate in recognition of the fact that there is no *guarantee* that any such weapon is not potentially lethal, especially if inappropriately applied.

The remainder of this literature review is arranged as follows. We start with a brief history of LTL weapons. Different types of LTL weapons are then discussed. The chapter concludes with a summary of the literature on control and application of LTL weapons.

History of Less Than Lethal Weapons

Law enforcement use of LTL weapons dates back to the beginning of professional law enforcement, with the creation of the London police force in 1829. The first police officers received a short baton (or truncheon) along with a rattle for summoning help.[6] American cities followed the British model with both the establishment of police forces and the issuance of batons, but the experience of the two nations in the use of force indicates sharp contrasts. London police showed an admirable restraint with their batons, while social turmoil in America from 1840 to 1870 fostered a stronger inclination toward the use of force. As one history on the subject relates, "Charges of police brutality appeared most often during this era, when officers frequently clubbed 'respectable' citizens. The use of clubs became a permanent legacy once the police discovered how useful such force could be in curbside problem solving."[7]

Interestingly, chemical weapons were the only major less than lethal weapon development for policing between 1860 and 1959.[8] The development paralleled wartime use of chemicals. In 1912, Paris police quelled rioters by throwing grenades containing an early form of tear gas. Police forces around the world then began to acquire a variety of forms of tear gas for emergency situations.

With the increased civil disturbances of the 1960s, interest in LTL weapons also increased. Serious reports on these weapons first appeared during that decade. However, far from chronicling the development of a range of effective new weapons, the reports mostly decry the lack of LTL weapons and call for increased research and development. One report notes that

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4 Jamieson, Hull, and Battershill, p. 13.

5 Security Planning Corporation, *Nonlethal Weapons for Law Enforcement: Research Needs and Priorities* (Washington: Law Enforcement Assistance Administration, 1972), p. 14.

6 Ken Peak, "The Quest for Alternatives to Lethal Force: A Heuristic View," *Journal of Contemporary Criminal Justice*, Vol. 6, No. 1, February 1990, p. 10.

7 Peak, p. 10.

8 Peak, p. 11.

"many of the weapons already extensively in use have never been subject to explicitly detailed, comprehensive evaluation as to their effectiveness, applicability, limitations, costs, etc."[9] The report complains of the lack of data on LTL weapons, techniques, and training. It calls for a systematic, centralized program of research and development, including problem analysis, determination of objectives, testing, evaluation, reporting, and training, along with a program of public relations to increase understanding of the need for LTL weapons.

The Kerner Commission report on civil disorders published in 1968 notes the failure of police departments to train officers in the proper use of the baton.[10] It adds, "The most serious deficiencies, however, are in advanced nonlethal weapons. . . . While most of the police departments surveyed possessed some chemical weapons with varying degrees of supplies on hand, they lacked sufficient gas masks to equip even 30 percent of their personnel. The lack of gas masks restricts the use of gas by many police forces." The report calls on the federal government to test and evaluate available LTL weapons and set technical specifications.

The Milton Eisenhower Commission report on violence published a year later calls for "scientific and technical research . . . to develop an effective nonlethal weapon or ammunition that would incapacitate but not kill an attacker. Replacing existing police and home defense weapons with nonlethal weapons would not interfere with self-protection, but would eliminate many fatal firearm incidents. Private industry, the government, and foundations charged with allocation of funds for scientific research should be encouraged to join forces in developing nonlethal weapons."[11] Reports published in 1970 and 1972 issued similar calls for development of new weapons.

Types of LTL Weapons

Over the last 20 years, the variety of LTL weapons has increased substantially. Police departments and correctional facilities now have a range of LTL weapons from which to select. For purposes of this report, we classify LTL weapons into four categories: impact weapons, chemical weapons, electrical weapons, and other LTL weapons. What follows is a brief description of the primary LTL weapons within each category. These groups are also the focus of the remaining chapters that provide results on the prevalence of specific LTL weapons in law enforcement and correctional agencies, on legal issues surrounding these weapons, and on

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9 Joseph F. Coates, *Nonlethal Weapons for Use by U.S. Law Enforcement Officers* (Arlington, Va.: Institute for Defense Analyses, 1967), pp. 1-6.

10 *Report of the National Advisory Commission on Civil Disorders (*The Kerner Commission*)* (Washington: 1968), p. 271.

11 Final Report of the National Commission on the Causes and Prevention of Violence (The Milton Eisenhower Commission): *To Establish Justice, To Insure Domestic Tranquillity* (Washington: 1969), p. 142.

policies and procedures concerning their use. Appendix A provides more detailed descriptions of LTL weapons.

Impact Weapons

Impact weapons include batons, flashlights, and other weapons intended for close combat with an individual.

Conventional, or straight, batons are the oldest type of LTL weapons found in law enforcement agencies. Straight batons, usually made of hardwood, aluminum, or plastic material, range from one to two inches in diameter and from 12 to 25 inches in length. Longer batons, in the range of 25 to 35 inches, are sometimes called riot batons. For example, a line of officers equipped with riot batons can restrict access to a given area. *Telescoping batons* are compact metal batons which extend into full-length batons. An eight-inch telescoping baton, for example, extends with a flick of the wrist to 21 inches. These batons are usually spring-loaded for expansion. Other common lengths are 6.25 inches (extending to 16 inches) and 9.75 inches (extending to 26 inches).

Side-handle batons are metal or plastic batons that feature a side handle attached at a right angle about six inches from the grip end. Side-handle batons are usually 24 inches long and 1.25 inches in diameter. The grip makes the baton more of a defensive weapon than a conventional baton. Telescoping batons are also manufactured in a side-handle form.

Heavy metal flashlights are usually 15 to 19 inches in length containing four to six flashlight cells. As LTL weapons, they are meant to be used as defensive weapons until other means are available to subdue a combative individual.

Other traditional impact weapons are blackjacks, short leather clubs containing a lead center, and billy clubs, short straight batons, 8 to 16 inches in length, usually made from hardwood.

Chemical Weapons

CN tear gas (the chemical chloroacetophenone is the active agent) and *CS tear gas* (ortho-chlorobenzylidene malononitrile is the active agent) are tear gas products that have been available for over 50 years. They are both chemical irritants that attack the human tearing or lacrimal glands around the eyes, causing watering and partial closing of the eyes. CN and CS products usually come in aerosol canisters about 5 inches high and 1.25 inches in diameter. Officers can carry these canisters on their belts. CN acts quickly, taking between two and five seconds for an effect; CS takes between 20 and 30 seconds. However, CS produces a much more severe effect. One drawback of both CN and CS is that they are ineffective on animals. The

OC or Oleoresin Capsicum, a more recently developed product, is an organic extract of the capsicum pepper family. It is packaged in aerosol canisters that contain a mixture of oleoresin capsicum and a carrier such as isopropyl alcohol, water, or a refrigeration agent. The OC concentration (usually between 5 and 5.5 percent) and the type of carrier are the primary determining factors in the effectiveness of the spray. OC canisters are available in several different sizes ranging from small, pocket-size units for non-uniformed personnel to large canisters for correctional facilities and crowd control.

OC spray differs from CN and CS gases because it is an inflammatory agent rather than an irritant. OC usually causes the eyes to close, which is accompanied by coughing and a temporary loss of strength and coordination. It has several advantages over tear gases. It is effective with intoxicated and agitated individuals, and many postal workers carry OC because of its effectiveness on vicious animals. In addition, it has fewer decontamination problems than tear gases. Common brand names are CAP-STUN, Pepperguard, The Guardian, and CAS-OC.[12]

Tranquilizer darts are a final type of chemical weapon that, as the name conveys, incapacitate through chemically treated darts. Our analysis indicates that tranquilizer darts are rarely found in law enforcement agencies and, when found, always apply to incapacitation of animals.

Electrical Weapons

Electrical weapons are devices that generate a high voltage/low amperage current into a person, thereby causing incapacitation. The two most common electrical weapons are electronic stun weapons and close-range electrical weapons. Both produce a stun or electrical shock effect.

An *electronic stun gun* is a hand-held battery operated device (approximately 9" by 3" by 2") that shoots out two contactors to a distance of approximately 15 feet. The contactors, which affix to a person's skin or clothing, connect with the unit by thin wires. The user controls the person's movement by transmitting electric current through the wires. Stun guns have successfully subdued particularly violent persons on drugs or persons who are mentally deranged. One article documents that in 16 of 19 violent PCP cases in Los Angeles, officers successfully concluded incidents with taser stun guns, resulting in no injuries to officers or the individuals.[13]

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[12] Also see Jami Onnen, "Oleoresin Capsicum," *Executive Brief*, International Association of Chiefs of Police, June 1993.

[13] Greg Meyer, "Nonlethal Weapons vs. Conventional Police Tactics: Assessing Injuries and Liabilities," *The Police Chief*, August 1992, p. 10-17.

A *close-range electrical weapon* usually is a hand-held device (approximately 4" by 2" by 1") with two small prongs through which an electrical impulse passes. Another type is a glove with a small electric generator that creates an electrical discharge.

Other LTL Weapons

Other weapons considered as LTL weapons include rifles that fire a low-lethality projectile, physical pressure compliance tools, capture nets, and stunning devices.

Low-lethality projectiles launchers are usually single-shot or five-shot weapons with accuracy against targets out to approximately 125 yards. The weapon fires different types of projectiles, including smoke canisters, tear gas canisters, and bean bags (typically filled with pellets). The Arwen 37 millimeter weapon is the most common of this type.

Physical pressure techniques aim at incapacitating an individual by causing pain.[14] The most common type of *physical pressure compliance weapon* is the ORCUTT Police Nunchaku, two twelve-inch plastic handles connected by a four-inch nylon cord. The pain induced by twisting the cord around a limb causes compliance. A variation of the nunchaku is the Kubotan, which has the same basic construction except the cord runs from the middle of one stick to the middle of the other stick.

A *capture net* is a polyester net, usually 10 feet by 14 feet, that is cast over a violent person. The net encloses around and entangles the person in a web of strong netting. The netting greatly restricts movement and allows the officers to approach without harm. A capture net requires two to three officers to operate in a safe manner. It has proven particularly effective on persons who are potentially violent because of the effects of drugs such as PCP.

Stunning devices produce a loud bang coupled with a bright light as a diversionary tactic. Police sometimes use hand grenades of this type against armed suspects in a building or closed space, barricaded persons, hostage situations, etc. The grenades, which generate no lethal fragments, aim at distracting or disorienting the suspects.

Some authors expand the range of LTL weapons to include the use of dogs and hand movements (e.g., fists and slaps). For the purposes of this study, we have included only the LTL weapons defined in this section.

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[14] These techniques also include manual procedures such as pressing on pressure points and twisting a person's arm. Manual techniques are not a part of this study because our emphasis is on weapons.

Use of LTL Weapons

Why and When to Use LTL Weapons

While sources often differ on the use of specific LTL weapons, little disagreement appears in the literature on the broad, philosophical question of why these weapons are necessary. A report in 1967 notes that "the law enforcement officer is neither permitted nor encouraged to use more force than is necessary to achieve his lawful objectives. Nonlethal weapons are not likely to replace firearms, but they could fill a need in those situations in which the police cannot now effectively use firearms and have no other means of physical apprehension."[15] The report adds, "For many . . . situations, a police officer needs a weapon which he can use more freely than the pistol and more effectively than the nightstick."

The 1972 report by the Security Planning Corporation articulates the need for LTL weapons as follows:

> It is not the function of the police to injure or kill. The imposition of 'curbstone justice' by the police, inflicting pain and injury to punish for past transgressions or deter future ones, is repugnant to our legal system. Police application of force is authorized only to compel obedience with a valid police order or to protect officers, citizens, or property from illegal harm.
>
> . . . The use of deadly force creates the risk of death for the entirely innocent–bystanders, hostages, and officers themselves–as well as the putatively guilty. It often overpunishes offenders, who would be imprisoned rather than executed through the judicial process. And it substantially increases the probability that police misjudgment about the seriousness of a situation or the identity of an offender will have irreversible and tragic consequences.
>
> . . . [B]ecause nonlethality has ethical, social, and political advantages, research and development on nonlethal weapons for law enforcement is warranted.[16]

In the Attorney General's 1987 report, the Director of the National Institute of Justice expands on an earlier idea of filling the void between baton and firearm: "Law enforcement officials have long recognized that a wide and dangerous gap exists in the range of tools that are available to them. The most common law enforcement tools, the nightstick and the gun, may be

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15 Coates, pp. 1,4.

16 Security Planning Corporation, p. 12.

either too weak or too strong a response to many police situations. In violent confrontations, officers may be obliged to choose an unnecessarily strong response for lack of an effective alternative weapon."[17]

Reasons for not using LTL weapons–most of which are identical to the reasons to avoid using firearms–are threefold:

- To avoid costly lawsuits for wrongful death or excessive force.
- To avoid offending "some of our highest national ideals–the preservation of life, and the right of a suspect to due process."[18]
- To avoid violating the decision of the U.S. Supreme Court in *Tennessee* v. *Garner*, in which the Court held that the "use of force to apprehend an apparently unarmed, nonviolent fleeing felon is an unreasonable seizure under the Fourth Amendment."[19]

Chapter 5 gives an in-depth discussion on the legal issues surrounding LTL weapons.

The literature also suggests reasons to avoid more injurious LTL weapons in favor of less injurious ones. An incident in Miami highlights the problem:

> Haitians clubbed . . . by Miami police will get money for the pain of the beatings at a 1990 shopping-center demonstration near Little Haiti. The city of Miami . . . agreed to pay $650,000 to 56 Haitian-Americans arrested by club-wielding officers during a raucous protest outside a Cuban-owned clothing store.[20]

Use of LTL Weapons by Law Enforcement Agencies

Specific tactical situations where LTL weapons seem to be particularly useful to law enforcement agencies include the following:

- Close proximity encounters (breaking up fights, intervening in domestic disputes)
- Flight by suspects
- Hostage situations, including those perpetrated by terrorists
- Barricade situations in which the subject is violent but has not taken hostages
- Crowd control or riots[21]

Two factors mitigate the use of LTL weapons: training and policies. The British Columbia report notes that liability lawsuits make training on LTL weapons vital. In such suits, attorneys typically argue that

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17 Sweetman, p. iii.

18 Sweetman, p. iii.

19 105 S. Ct. 1694 (1985); 710 F. 2d 240 (6th Circuit 1983).

20 Nancy San Martin, "Miami will give $650,000 to protesters police clubbed," *The* [Fort Lauderdale] *Sun-Sentinel*, February 6, 1993.

21 Sweetman, p. 2.

- Injury occurred because the officer was not properly trained (initially or in-service) on the particular weapon.
- The officer was not equipped with an LTL weapon, which the police department should have reasonably foreseen as needed.
- Officers with a history of aggressive behavior are not adequately supervised by the police department.
- Police department policies and procedures on the use of force are inadequate.[22]

Most departments now require both recruit training and in-service training on LTL weapons (see Chapter 3 for survey results on training hours).

The International Association of Chiefs of Police (IACP) has developed a model policy that lists the following "parameters on the use of nondeadly force":

1. Where deadly force is not authorized, officers should assess the incident in order to determine which nondeadly technique or weapon will best de-escalate the incident and bring it under control in a safe manner.

2. Police officers are authorized to use department-approved nondeadly force techniques and are issued equipment for resolution of incidents, as follows:

    a. To protect themselves or another from physical harm; or
    b. To restrain or subdue a resistant individual; or
    c. To bring an unlawful situation safely and effectively under control.[23]

The model policy also specifies that "a police officer is not permitted to use a nondeadly weapon unless qualified in its proficient use as determined by training procedures" and that "a written report prepared according to departmental procedures will be required in the following situations: . . . when a use of force results in death or injury [and] when a nonlethal weapon is used on a person."

Chapter 6 provides an analysis of policies and procedure on LTL weapons in law enforcement agencies.

Use of LTL Weapons in Detention and Corrections

Jails and prisons employ LTL weapons differently than law enforcement agencies because their situations differ considerably. Jails and prisons control a captive population in confined areas, and they seldom deal with hostage incidents. Disturbances are a constant concern, but they differ from riots in an open area. The limited confines in jails and prisons enable officials to plan reactions to disturbances and to predict the movement of prisoners.[24]

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22 Jamieson, p. 8.

23 *Model Use of Force Policy.* Arlington, Va.: International Association of Chiefs of Police/Bureau of Justice Assistance National Law Enforcement Policy Center, 1989.

24 David W. Hayeslip, *Needs Assessment Report: Less Than Lethal Weapons Workshop, March 2-3, 1992*, unpublished summary of National Institute of Justice workshop.

More time is also available for deliberation of actions. Weapons must be present in the facility, and a legitimate concern is preventing access by prisoners.[25]

Beyond these observations, however, the literature has little to say. The 1972 Security Planning Corporation report says that in the meetings preceding the report, "the use of nonlethal weapons in custodial institutions–prisons, mental hospitals, etc.–and by private security forces was also considered." Unfortunately, the report provides no specific discussion and findings.[26]

An article in *Corrections Today* describes a survey of policies on LTL weapons in prisons. Surveys were sent to the adult correctional departments in all 50 states and to the Federal Bureau of Prisons (FBP). Thirty states and the FBP responded. Ninety-seven percent of the respondents said they had a written policy on nondeadly force. However, responses suggested that many prison policies are ambiguous and incomplete, particularly on definitions of reasonable and minimum force, escalation of force, control tactics, and reporting requirements.[27]

There is clear agreement in the literature that correctional agencies need LTL weapons. A 1975 document recommends specific LTL weapons for specific situations: electrical devices for an assault on an officer, water cannon bursts or barrage projectiles for a dining area riot, and irritant and smoke projectiles for a riot with hostages.[28]

More recent literature suggests a strong preference for chemical agents (especially OC) and electrical devices. According to the *Correctional Officer Resource Guide*, chemical agents may be used, within agency policy, under the following general conditions:

- To prevent serious injury or loss of life
- To prevent or suppress escalating riots or disturbances
- To prevent extensive, willful destruction of property[29]

The guide also notes that tear gas agents may be deployed via grenades, low-lethality projectile rifles, and aerosol dispensers. In addition, fixed systems can release tear gases into different areas in a calculated sequence that drives inmates from one area to another.[30] The systems can also release the chemical in different concentrations, according to need.

The Arlington County, Virginia, Sheriff's Office, responsible for the care and confinement of all prisoners in the county detention center, has OC available in the detention

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25 Hayeslip.

26 Security Planning Corporation, p. 13.

27 Daniel L. Ross, "Study Examines Non-Deadly Physical Force Policies," *Corrections Today*, July 1990, p. 64.

28 Donald O. Egner and Larry Williams, *Standard Scenarios for the Less-Lethal Weapons: Evaluation Model*, US Army Engineering Laboratory Technical Memorandum 20-75, August 1975, p. 19.

29 *Correctional Officer Resource Guide* (Laurel, Md.: American Correctional Association, 1992), p. 54.

30 *Stop trouble fast with no hostages*, TG Guard Prison Security System brochure, no date.

center's booking room. The agency rates OC as "very effective" in terms of subduing inmates and "very safe" in terms of its effect on the officer as well as other inmates nearby.

Another recent report confirms the high regard corrections officials have for OC, especially for use in one-to-one or small group confrontations.[31] Corrections officials prefer an OC canister capable of delivering only one or two doses; if inmates gain possession, they cannot turn the canister on guards with any significant effect. Correctional facilities also use close-up electrical weapons, such as stun guns, electrical gloves, and flashlights with stun electrodes.[32]

The Maricopa County, Arizona, Sheriff's Office assessed stun guns for its jail facility as follows:

> A very important statistic that should be noted by detention administration is the fact that seven uses of the device by transport employees were to assist detention officers who were involved in confrontations and were unable to control the situation by existing methods. . . .
>
> One instance in particular might have resulted in serious injury to the personnel involved, but the stun device neutralized the situation without causing treatable injuries to anyone involved.
>
> The device was successful in controlling situations in 15 of 16 detention uses, for a 94% success rate. The only failure might have been a result of the subject being mentally unstable and tolerant to pain.[33]

Other weapons examined for use in corrections seem to have serious drawbacks. As indicated in the *Correctional Officer Resource Guide*,

> Nondeadly ammunition can be used to control some violent situations. These include wooden or rubber bullets for shotguns, "beanbag" rounds for handguns, and other specialty cartridges. However, staff using them should be aware that even these rounds may be deadly at close range.[34]

LTL Weapons in the Force Continuum

The force continuum "connotes a spectrum of control tactics from body language and oral communication to weaponless physical control to nonlethal weapons to lethal measures."[35] The literature reports two different models to help officers decide what level of force to select in various situations: the *incremental* force model and the *situational* force model.

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31 Hayeslip.

32 Sweetman, p. 6.

33 Darwin N. Barrie, "Maricopa County's Evaluation of Less-Than-Lethal Electronic Devices," *The Police Chief*, June 1988, p. 17.

34 *Correctional Officer Resource Guide*, p. 52.

35 Geller and Scott, p. 309.

The British Columbia report describes the incremental force model as consisting of the following increasingly serious steps:

1. Appearance and communication
2. Open hand tactics
3. Closed hand tactics or kicks
4. Baton
5. Carotid control
6. Firearm[36]

Under the *incremental* model, officers start at a low level of force and escalate if the situation worsens. However, the British Columbia report notes several problems. Officers under stress have started with the lowest levels of force when dealing with individuals rushing at them with knives or firearms. Another complaint is that the model limits the number of steps, leaving out new options. Finally, the model allows the legal argument that all lower levels of force must be exhausted before an officer tries higher levels.

Under the *situational* force model, officers select the most appropriate force option given the circumstances of an incident. If the circumstances change, the officer reevaluates and selects a different option.

Regardless of the model selected, questions remain about where to place various LTL weapons along the force continuum. The FBI places LTL weapons just above verbalization.[37] The Goldsboro, North Carolina, Police Department writes that "oleoresin capsicum fits very nicely between passive controls and batons [in the force continuum]."[38]

The Arlington County, Virginia, Police Department shows the benefits of successfully using a lower level of force than strictly justifiable:

> Three of nearly 100 [LTL] encounters in 1991 and 1992 involved persons who brandished knives–when deadly force could reasonably have been used. In these instances, LTL weapons were used–principally OC. Each confrontation ended without injury to any of the combatants.[39]

Interestingly, a directive from this department places other LTL weapons much higher on the force continuum. In fact, the directive states that the use of batons and flashlights is not considered a less than lethal application of force if they are employed to deliver an "intentional blow to the head or spinal column of an individual." Such blows are considered an application of deadly force.

In regard to batons, one publication states that "most police trainers will consider it a poor practice or even negligence not to issue and train officers with a baton. . . . The alleged negligent act is allowing officers to escalate from hand holds and pain compliance directly to deadly force,

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36 Jamieson, p. 10.

37 *Knockdown Update*, November 1992.

38 J. P. Morgan, "Oleoresin Capsicum Policy Considerations," *The Police Chief*, August 1992, p. 22.

39 See Chapter 4 of this report.

when the application of a greater degree of non-lethal force would likely have accomplished the objective of overcoming resistance."[40]

Objections to the Use of LTL Weapons

Despite the laudable purpose of LTL weapons–controlling people without resorting to deadly force–the literature reports many objections to the use of such weapons. These objections have come from law enforcement, the general public, the legal community, and government.

The 1972 Security Planning Corporation report lists six objections to LTL weapons, all of which suggest that they hinder law enforcement.

1. Nonlethal weapons would escalate confrontations with the police because offenders would not feel threatened, and might be incited, by the appearance or use of nonlethal weapons.
2. Nonlethal weapons give the armed criminal a 'trade-off advantage,' endangering a law enforcement officer confronting him.
3. Police will be endangered because the choice among weapons will delay their response when speed is critical.
4. Even assuming that nonlethal weapons do not lead to disarmament of the police, they will increase the practical and political difficulty of utilizing deadly force.
5. The utilization of nonlethal weapons, especially against political protesters, might aggravate a situation by creating sympathy for those against whom they are used.
6. More basically, nonlethal weapons decrease the credibility of law enforcement by substituting an etiquette of non-violence for a retributive theory of policing.[41]

The proliferation of LTL weapons has, in fact, led to other objections. According to one source, "There seems to exist a reasonable fear among police officers that they will be saddled with technological devices that will further inhibit their reliance upon guns for self-protection and thereby place them in deeper jeopardy."[42] The British Columbia report responds by noting that it does not intend "to suggest that police officers should be placed in a position of using a less than lethal option where use of such an option would place them in grave danger."[43] The Arlington County Police Department similarly cautions that, while OC is to be carried in the duty belts of officers, it "is not intended to be used in a life and death situation as an alternative to the legitimate use of deadly force."

Geller and Scott observe, "It is a continuing irony of the less than lethal weapons field that the devices that hold the greatest potential for controlling police adversaries with minimum

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40 "Use of Force Tactics and Non-Lethal Weaponry," *AELE Alert*, 1988, No. 3, p. 1.

41 Security Planning Corporation, pp. 37-39.

42 Gilbert Geis and Arnold Binder, "Non-Lethal Weapons: The Potential and the Pitfalls," *Journal of Contemporary Criminal Justice*, Vol. 6, No. 1, February 1990, p. 3.

43 Jamieson, p. 14.

injury are so rooted in Western society's imagery of evil that they become politically untenable."[44] The authors continue: "Sometimes a police department expects that its use of nonlethal weapons in lieu of firearms will win it greater support in sectors of the community where the department traditionally has not enjoyed strong support. . . . But often the department's 'reward' for breaking a suspect's leg or zapping him with a taser rather than shooting him will be cries of police brutality."[45]

Specific LTL weapons have received criticism in recent years. For example, concern about the use of nunchakus for pain compliance has appeared even in law reviews. The *San Diego Law Review* has this to say:

> . . .One finds disturbing similarity between accounts of the nunchaku in use and Webster's common definition of "torture." In verb form torture is defined as "1: to cause intense suffering to: TORMENT 2: to punish or coerce by inflicting excruciating pain 3: to twist or wrench out of shape: DISTORT, WARP.". .
>
> The question . . . is whether it is lawful for police to intentionally inflict severe pain on a non-violent, passive arrestee to compel that person to walk.[46]

The author contrasts nunchaku pain compliance with the practices of the Washington, D.C., Police Department, which "does not employ pain-inducing techniques of any kind in effecting arrests in nonviolent situations."

Disapproval of the use of nunchakus has also appeared in Congress: "In introducing a measure to limit the police use of force in arresting nonviolent protesters, William Armstrong [R-Colo.] decried pain compliance as 'something we expect to hear about in Nicaragua or Nazi Germany–but not in the United States of America.' "[47]

Criteria for Judging LTL Weapons

How should a department decide which LTL weapons to use? And how should that department decide which model or brand of a particular weapon to select? The literature is generous in providing lists of questions or criteria that prospective purchasers should consider.

Geller and Scott list more than 50 questions an agency should answer before adopting an LTL weapon. The questions fall into the categories of needs assessment, effectiveness, safety

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44 Geller and Scott, p. 387.

45 Geller and Scott, p. 392.

46 Benjamin I. Whipple, "The Fourth Amendment and the Police Use of 'Pain Compliance' Techniques on Nonviolent Arrestees," *San Diego Law Review*, Vol. 28, pp. 178-183.

47 Bob Sipchen, "Politics, Pain and the Police," *The Los Angeles Times*, January 8, 1990, p. A1.

and operational efficiency, political and legal liability, infrastructure considerations, and cost.[48] Another source lists several performance criteria for nonlethal weapons, including public safety, reliability, duration of effects, public acceptance, ease of use, and cost effectiveness.[49]

The British Columbia report distinguishes between equipment for emergency response teams and weapons for general duty or patrol since "some less than lethal equipment is completely impractical for patrol applications (stun grenades, Arwen guns, etc.). When examining practicality of a piece of equipment for patrol officers, it is necessary to examine factors such as whether the article can be worn on the belt, how much specialized training is required, etc."[50]

The 1987 report on the Attorney General's conference states, "The design of a new device should incorporate features to limit the potential for abusive use," and adds, "Devices must not be overly complex; they must be durable and simple for the officer to use, but potentially difficult for others to use, should the officer lose possession during a confrontation."[51] That report then notes that an LTL weapon must:

- Fire more than once without reloading
- Operate at a range of less than one foot up to five to 10 feet
- Operate with one hand
- Be light enough to carry on a standard service belt
- Have a mechanism that the officer can operate easily but that an assailant gaining control of the weapon might find difficult
- Provide a high probability of instantaneous control over a highly motivated suspect
- Have minimal medical implications for normally healthy subjects
- Indicate when the device is in proper working order
- Have observable effects so that it is clear when it has been used
- Have a high probability of affecting only the intended target(s)
- Be durable and capable of being operated in most environmental conditions
- Have only a temporary effect[52]

Published standards are another criteria against which to judge a specific LTL weapon. For example, a standard from the Technology Assessment Program of the National Institute of Justice "establishes minimum performance requirements and methods of test, including safety and handling aspects, for hand-held aerosol tear gas (less-than-lethal) weapons used by law

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48 Geller and Scott, pp. 360-364.

49 Security Planning Corporation, p. 6.

50 Jamieson, p. 14.

51 Sweetman, p. 3.

52 Sweetman, pp. 12-15.

enforcement agencies."[53] That document explains, "Purchasers can use the test methods described in this standard themselves . . . or . . . have the tests conducted on their behalf by a qualified testing laboratory."

Controls on the Use of LTL Weapons

How can a law enforcement or correctional agency control the manner in which its officers use their LTL weapons? One source notes, "Reporting and control procedures, such as regular weighing or examination of weapons to determine if they have been used, have been established for chemical agents by some agencies, and are similar to those that have long been in effect for firearms."[54]

Another source looks for controls to be designed into the weapons themselves: "Given the isolated character of much police work, participants expressed the need for built-in assurances that LTL weapons will not be misused. . . . The design of the weapon itself might incorporate assurances against its misuse. The Nova [stun gun], for instance, will leave two marks on the skin, indicating where and how many times it has been used."[55]

A third source looks to training as the means of controlling field use of LTL weapons: "The importance of training cannot be [overstated], for it is through training that the appropriate department philosophy is shared with every member of the organization. Only through proper training can we provide the necessary safeguards to protect both the lives of our police officers and the citizens of this community that they serve."[56]

However, some authors doubt the complete efficacy of training when it comes to real-life applications of force. For example, regarding the use of heavy metal flashlights, one source observes, "[Despite training,] the officer will likely resort to instinctive tactics or previously learned behavior which frequently involves striking the subject in the head."[57]

Finally, law enforcement and correctional agencies must develop clearly delineated policies on the use of LTL weapons. These policies should list the authorized and unauthorized LTL weapons, provide guidelines on the use of these weapons, indicate the need for training and retraining, and establish reporting requirements on LTL weapon use.

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53 *Hand-Held Aerosol Tear Gas Weapons: NIJ Standard 0110.00*, Technology Assessment Program, National Institute of Justice, September 1985.

54 Security Planning Corporation, p. 34.

55 Sweetman, p. 26.

56 Smith, p. ii.

57 Terry C. Cox, Jerry S. Faugh, and William M. Nixon, "Police Use of Metal Flashlights as Weapons: An Analysis of Relevant Problems," *Journal of Police Science and Administration*, Vol. 13, No. 3, 1985, p. 245.

Chapter 3

LTL Weapons Survey

How many law enforcement and correctional agencies have LTL weapons? What are their frequencies of use? What are the training requirements? Are agencies considering any LTL weapons for purchase?

To obtain information on LTL weapons, ILJ conducted a survey of law enforcement and correctional agencies. The survey asked about the types of LTL weapons available, the first year of acquisition, number of units in service, approximate uses per year, perceived effectiveness, training requirements, and many other areas. This chapter presents the survey results, first for police and sheriffs departments and then for jails and prisons.

Survey Results for Police and Sheriffs Departments

Survey Methodology

The survey instrument was sent to all 199 counties with populations greater than 250,000 residents and 171 randomly selected counties with populations between 50,000 and 250,000 residents (from a total of 643 counties). Within each county, the largest city's police department received a survey to complete, and the county sheriff's department received a survey if the sheriff had law enforcement responsibilities.[1] In total, ILJ mailed 370 surveys to police chiefs and 314 surveys to sheriffs. Two hundred and twenty-eight police departments and 150 sheriffs departments returned surveys (61.6 percent and 47.8 percent response rates, respectively).

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[1] In most states, the sheriff in a county has responsibilities for law enforcement duties, such as responding to citizen calls and investigating crimes, either in the entire county or in its unincorporated areas. However, in a few states, such as Nevada, New Hampshire, North Dakota, and Pennsylvania, the sheriff has only jail and court security responsibilities with no law enforcement duties. Sheriffs in these states did not receive a law enforcement survey, but they did receive a jail survey if they were in the sampled counties.

By way of background, Exhibit 3-1 shows average agency size and budget for the responding departments. Departments in small counties average about $3.75 million for their 1992 budgets ($3.5 million for the police departments and $4.0 million for the sheriffs departments). Departments in large counties have substantially larger budgets, averaging $24.3 million ($26.8 million for police departments and $21.0 million for sheriffs departments).

The small police departments average 67 sworn personnel, compared to 424 sworn personnel in the large departments. Patrol assignments account for about two-thirds of the sworn personnel in departments from both large and small counties.

The small sheriffs departments average 66 sworn personnel and the large departments average 270 sworn personnel. Compared to police departments, they assign fewer personnel to patrol, averaging 48 percent for the small departments and 38 percent for large departments. The need to assign sworn personnel to jail duties and court security probably accounts for these differences.[2]

Exhibit 3-1
Annual Budget and Sworn Personnel
1992

	Small Police Departments	Large Police Departments	Small Sheriffs Departments	Large Sheriffs Departments
Number of Respondents	112	116	77	73
1992 Budget	$3,521,000	$26,808,000	$3,969,000	$21,000,000
Total Sworn Personnel	67	424	66	270
Assigned to Patrol	44	263	32	104

NOTE: Budget and personnel figures are medians.

Prevalence of LTL Weapons

Exhibit 3-2 gives the number of sampled departments reporting different types of LTL weapons. As discussed in Chapter 2, LTL weapon categories are impact weapons, chemical weapons, electrical weapons, and other LTL weapons. Impact weapons dominate, with 93 percent of the departments reporting at least one type of impact weapon available. Fifty-seven percent have side-handle batons and 51 percent have conventional batons. Forty percent report

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[2] In this discussion, we report medians rather than means because of the influence of a few large values which inflate the means. For example, the mean number of sworn personnel in large police departments is 1,218, which is almost three times the median. The difference is due to a few very large departments, particularly in Los Angeles and New York City. We believe the medians more accurately reflect the population figures.

having telescoping batons, reflecting increased popularity of this more recently developed weapon. Many departments report having more than one baton type, with 47 departments (12.4 percent) issuing all three types. Interestingly, 38 departments (10.1 percent) stated that they do not purchase batons.

About 35 percent of the police and sheriffs departments issue heavy metal flashlights. As we discuss in Chapter 6, *Use of Force Policies*, departments generally permit the use of flashlights for defensive purposes, but do not authorize their use as LTL weapons. One survey respondent stated,

> Heavy rechargeable flashlights are installed in all cars. They have not been approved for use as a weapon. There have been instances, however, where officers have used them in an emergency as a defensive tool until they could obtain the appropriate weapon or backup.
>
> Department policy precludes the use of the flashlight as an 'offensive' weapon–does allow use for defensive purposes when officer is actually assaulted.

Chemical weapons are the second most frequently acquired LTL weapon and are available in 71 percent of the police departments and 65 percent of the sheriffs departments. Oleoresin capsicum (OC) sprays lead the way (41 percent of departments), followed by CN sprays in 33 percent of the departments and CS sprays in 26 percent of the departments. One hundred departments (26.5 percent) marked more than one type of spray, but 132 departments (35.0 percent) do not issue any sprays.

The availability of electrical weapons and other LTL weapons is much more limited than either impact or chemical weapons. Only 16 percent of the departments state they have electronic stun devices (usually tasers), and only 19 percent have weapons for firing low-lethality projectiles (usually Arwen 37mm rifles). Stunning explosives are more common, as reported by 37 percent of the departments.

The percentages in Exhibit 3-2 are about the same for police and sheriffs departments. OC sprays, for example, are in 40.8 percent of the police departments and 41.3 percent of the sheriffs departments; telescoping batons are in 39.9 percent of the police departments and 39.3 percent of the sheriffs departments; and electronic stun weapons are in 15.4 percent of the police departments and 16.7 percent of the sheriffs departments. The only exception is with conventional batons, which are in 57.5 of police departments compared to 40.0 percent of sheriffs departments.

Exhibit 3-2
Prevalence of LTL Weapons
Police and Sheriffs Departments

	Results from Sampled Departments					Estimates for All Departments			
	Police Depts. (n=228)		Sheriffs Depts. (n=150)		Average Year of	Police Depts. (N=842)		Sheriffs Depts. (N=781)	
Impact Weapons	No.	Percent	No.	Percent	Acquisition	No.	Percent	No.	Percent
Conventional Batons	131	57.5	60	40.0	1967	485	57.6	281	36.0
Side-Handle Batons	129	56.6	85	56.7	1984	487	57.9	488	62.5
Telescoping Batons	91	39.9	59	39.3	1990	367	43.6	258	33.0
Heavy Metal Flashlights	76	33.3	54	36.0	1979	327	38.9	309	39.6
Close-Range Impact Weapons	2	0.1	10	6.7	1958	74	8.8	41	5.2
Other Impact Weapons	16	7.0	10	6.7	1983	50	5.9	57	7.4
Departments with Impact Weapons	**214**	**93.9**	**139**	**92.7**		**780**	**92.6**	**727**	**93.0**
Chemical Weapons									
Chemical Irritant Sprays/CN	79	34.6	44	29.3	1974	273	32.4	223	28.6
Chemical Irritant Sprays/CS	61	26.8	39	26.0	1975	200	23.8	199	25.4
Oleoresin Capsicum (OC) Sprays	93	40.8	62	41.3	1991	352	41.8	318	40.7
Systemic Chemical Agent (tranquilizer darts)	4	1.8	1	.7	1976	6	.8	3	.3
Other Chemical Weapons	23	10.1	10	6.7	1984	89	10.5	42	5.4
Departments with Chemical Weapons	**161**	**70.6**	**97**	**64.7**		**580**	**68.9**	**487**	**62.4**
Electrical Weapons									
Electronic Stun Weapons	35	15.4	25	16.7	1985	95	11.2	140	17.9
Close-Range Electrical Weapons	15	6.6	16	10.7	1986	59	7.0	77	9.8
Other Electrical Weapons	8	3.5	12	8.0	1986	35	4.1	70	9.0
Departments with Electrical Weapons	**49**	**21.5**	**46**	**30.7**		**165**	**19.6**	**254**	**32.5**
Other LTL Weapons									
Weapons for Low-Lethality Projectiles	42	18.4	33	22.0	1980	150	17.8	162	20.8
Physical Pressure Compliance Tools	10	4.4	8	5.3	1986	36	4.2	35	4.5
Stunning Explosives	89	39.0	49	32.7	1987	307	36.5	209	26.7
Other LTL Weapons	13	5.7	11	7.3	1985	36	4.3	54	6.9
Departments with Other Weapons	**117**	**51.3**	**70**	**46.7**		**403**	**47.9**	**346**	**44.3**

We discovered differences, however, by population. For example, small departments are more likely to have heavy metal flashlights than large departments, 42 percent compared to only 27 percent–a statistically significant difference (chi-squared value = 9.2, significant at the .01 level). On the other hand, stunning explosives are more prevalent in large departments, with 42 percent having stunning explosives, compared to 31 percent of the small departments, which is again a statistically significant difference (chi-squared value = 5.5, significant at the .05 level).

Respondents were asked to provide the first year of acquisition for each weapon. This information was used to calculate an *average year of acquisiton*, as shown in Exhibit 3-2. Some LTL weapons, such as conventional batons and CN/CS sprays, have been around for decades (one department reported 1902 for its initial purchase of batons). Departments purchased other types of weapons, such as electronic stun weapons and stunning explosives, during the 1980s. A large majority (72 percent) of departments with electronic stun weapons report initial purchases during these years. Similarly, 69 percent of departments with stunning explosives gave the 1980s as the initial acquisition period. In contrast, telescoping batons were generally purchased between 1990 and 1992. This is an expected result, since these batons first appeared commercially around 1988. Similarly, since OC spray came on the market about 1990, an average acquisition year of 1991 is not surprising; 41 percent of departments with OC spray gave 1992 as the initial acquisition year.[3]

With results from the sampled departments, we can estimate the total number of departments having LTL weapons. As explained earlier, the surveyed counties have a total of 842 police departments and 781 sheriffs departments. Estimates on how many of these departments have LTL weapons can be made by extrapolating from the sample statistics.[4] These extrapolated results, which appear in the last four columns of Exhibit 3-2, follow the same pattern as the sampled departments. For example, we estimate that impact weapons are available in 780 police departments (92.6 percent) and 727 sheriffs departments (93.0 percent). We also estimate that 580 police departments (68.9 percent) and 487 sheriffs departments (62.4 percent)

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3 We found no major differences between police and sheriffs departments regarding average years of acquisition. Similarly, we found virtually no differences based on population size.

4 Making population estimates from samples is a standard statistical technique usually based on the percentage of the sample taken from different subpopulations. To make our estimates, we divided the counties into eight population groups. Let T_i be the number of counties in population group i (i=1, 2,...8), and let n_i be the sample size from T_i and p_i be the number from the sample with a particular type of LTL weapon. Then the estimate of the number of departments in T_i with this LTL weapon is given by $p_i T_i / n_i$. This estimate was made for each of the population groups and then summed to give the estimates in Exhibit 3-3. Because of this estimate procedure, the percentages in Exhibit 3-3 will differ slightly from Exhibit 3-2.

have chemical weapons, with OC spray as the predominant chemical weapon (available in about 41 percent of the departments).

LTL Weapon Usage

Exhibit 3-3 expands the information on LTL weapons to include the number of units issued per 100 sworn personnel. The most frequently issued LTL weapons are conventional batons (65.4 units per 100 sworn), flashlights (68.5), side-handle batons (63.7), CN sprays (59.8), and OC sprays (53.9) . These figures reflect the previous result that many departments have more than one type of impact and chemical weapons. In some departments, there has been a change from one type of weapon to another, for example, from CN to OC spray; in other departments, each officer can select a type of baton or spray.

About 20 percent of the departments with batons or sprays issue these weapons to *all* sworn personnel, while the remaining 80 percent issue to selected groups. For example, some departments issue batons to all patrol personnel, but not to traffic officers, desk officers, and detectives. Issuance is, of course, a policy decision within each department.

Not only do electrical and other LTL weapons appear less frequently among departments, there are also fewer units per sworn personnel. Exhibit 3-3 shows that electronic stun weapons are in 16 percent of the departments, with 7.0 units per 100 sworn personnel. Weapons for firing projectiles are in 20 percent of the departments, with 3.2 units per 100 sworn personnel. These low numbers reflect the fact that departments issue these weapons to specialized units, such as SWAT teams, rather than to all patrol officers. They are intended for special situations, such as hostage situations, barricades, and subduing violent individuals.

Respondents were asked to rate each LTL weapon on four dimensions of effectiveness: effectiveness in subduing suspects, potential for citizen complaints, officer safety, and public safety. They scored each dimension from 1 to 5, with higher scores indicating greater effectiveness. In Exhibit 3-3, we see that OC sprays receive the most favorable average ratings at 4.4 for subduing suspects, 4.5 for citizen complaints, 4.3 for officer safety, and 4.5 for public safety. Flashlights receive the lowest ratings at 3.2 for subduing suspects, 3.1 for citizen complaints, 3.4 for officer safety, and 2.8 for public safety. Overall conclusions from the effectiveness averages are as follows:

- Side-handle and telescoping batons are more effective than conventional batons or flashlights.
- OC sprays are more effective than CN or CS sprays.

Exhibit 3-3
LTL Weapon Usage and Effectiveness
Police and Sheriffs Departments

	Number of Depts.	Percent (n=378)	Units Per 100 Sworn	Annual Uses Per Unit	Effectiveness Ratings of LTL Weapons: Subduing Suspects	Citizen Complaints	Officer Safety	Public Safety
Impact Weapons								
Conventional Batons	191	50.5	65.4	.42	3.5	3.5	3.5	3.3
Side-Handle Batons	214	56.6	63.7	.33	3.8	3.8	3.9	3.6
Telescoping Batons	150	39.7	37.4	.43	3.9	4.2	3.9	3.6
Heavy Metal Flashlights	130	34.4	68.5	.23	3.2	3.1	3.4	2.8
Chemical Weapons								
Chemical Irritant Sprays/CN	123	32.5	59.8	.28	3.3	4.0	3.3	3.6
Chemical Irritant Sprays/CS	100	26.5	44.8	.28	3.7	3.9	3.6	3.7
Oleoresin Capsicum (OC) Sprays	155	41.0	53.9	.74	4.4	4.5	4.3	4.5
Electrical Weapons								
Electronic Stun Weapons	60	15.9	7.0	1.58	3.6	4.4	3.9	4.2
Close-Range Electrical Weapons	31	8.2	16.2	1.06	3.1	4.1	3.0	3.9
Other LTL Weapons								
Weapons for Low-Lethality Projectiles	75	19.8	3.2	.89	4.1	4.5	4.4	3.5
Stunning Explosives	138	36.5	14.9	.87	4.6	4.5	4.2	3.7

NOTE: For effectiveness ratings, the scales were as follows:
Effectiveness in subduing suspects: Very Ineffective (1) to Very Effective (5)
Citizen complaints: Most Complaints (1) to Fewest Complaints (5)
Officer safety and public safety: Very Unsafe (1) to Very Safe (5)

- Projectile weapons and stunning devices have high averages for subduing suspects, citizen complaints, and officer safety, but lower scores than most other weapons for public safety.

The amount of training required for LTL weapons is a concern for police and sheriffs departments. Recruit training classes always include hours for proper use of lethal and LTL weapons. Most departments require annual retraining for all sworn personnel. Manufacturers of LTL weapons also provide training, particularly when departments first acquire the weapons. As seen in Exhibit 3-4, impact weapons require the highest amount of training, averaging over 11 hours for recruit training and 5 hours for annual retraining. Manufacturers' training time averages 9 hours for conventional batons, 18 hours for side-handle batons, and 11 hours for telescoping batons. Chemical weapons require less training, about 5 hours for recruit training, 5 hours for annual retraining, and 11 hours for training provided by manufacturers.

Exhibit 3-4
Training for LTL Weapons
Police and Sheriffs Departments

	Recruit Training Hours	Annual Retraining Hours	Mfg. Rep. Training Hours
Impact Weapons			
Conventional Batons	13.3	5.5	9.2
Side-Handle Batons	14.9	5.4	18.0
Telescoping Batons	11.8	5.3	11.1
Heavy Metal Flashlights	10.9	4.6	10.0
Chemical Weapons			
Chemical Irritant Sprays/CN	5.2	4.4	10.0
Chemical Irritant Sprays/CS	4.6	5.7	14.1
Oleoresin Capsicum (OC) Sprays	3.6	3.6	11.6
Electrical Weapons			
Electronic Stun Weapons	4.5	6.3	15.0
Close-Range Electrical Weapons	6.0	5.3	8.0
Other LTL Weapons			
Weapons for Low-Lethality Projectiles	5.2	8.2	17.5
Stunning Explosives	10.1	6.9	16.3

Selection of LTL Weapons

Police and sheriffs departments periodically research whether they should purchase a particular LTL weapon for sworn personnel or specialized units. The examination is usually driven by the introduction of a new LTL weapon into the marketplace or acceptance of an LTL weapon by other departments. Survey respondents provided information on the types of weapons under consideration for purchase. OC sprays were most frequently mentioned, with 91 departments (24 percent) indicating recent examination. The next highest number is for telescoping batons (19 departments), followed by side-handle batons (16 departments), and CN/CS sprays (14 departments). Other weapons under consideration are weapons for firing projectiles (9 departments), electronic stun weapons (6 departments) and flashlights (2 departments).

The survey also asked respondents about weapons they have discontinued using in the past five years. The main results are provided in Exhibit 3-5. Chemical irritants were discontinued in 86 departments, followed by batons in 57 departments, flashlights in 24 departments, electronic weapons in 23 departments, and blackjacks in 22 departments. Virtually all the discontinued chemical weapons are CN or CS products, a result that coincides with the adoption of OC sprays, as many departments now favor OC sprays over CN or CS irritants. Thirty-two departments no longer have conventional batons and 22 departments have dropped side-handle batons, but no department reported discontinuance of telescoping batons.

The primary reasons for discontinuing the use of chemical irritants are lack of effectiveness in subduing suspects, concern for officer safety, problems of reliability, and concern for public safety. For batons, the reasons are training costs, officer refusal to always carry batons, concern for officer safety, and lack of effectiveness in subduing suspects. Concerns for public safety and citizen complaints top the list of reasons for discontinuing flashlights, and reliability is the main concern with electronic weapons. Finally, departments have discontinued blackjacks because of their lack of effectiveness in subduing suspects and concern for public safety.

Several respondents commented on their research:

> CN replaced with OC, which is thought to be more effective.
>
> OC spray is generally regarded as a safe and effective LTL weapon by most patrol personnel. It is 'standard issue' for all patrol officers. As one officer stated, 'It is the greatest defensive tool I've seen in 20 years of police service.'

The finest weapon I have seen over my 22-year career is the [brand name] stun device. Although statistics are not available, I would estimate that resisting arrest cases were reduced around 85 percent from 1986 to 1990 because of the threat of the stun gun. Seldom does an officer need to fight with an arrestee any more if a stun gun is available to display.

Although OC is pending approval by our department, it seems to be a very effective and viable replacement for CN/CS.

Officer perception of CN was 'spray suspect and you might as well spray yourself.' We have switched to OC.

Testing and evaluation showed that capture nets would be ineffective for the situations to which this agency would most likely respond.

Exhibit 3-5
Types of LTL Weapons Discontinued
Police and Sheriffs Departments

Type of LTL Weapon Discontinued	Number of Departments
Chemical Irritants	86
Batons	57
Flashlights	24
Electronic Weapons	23
Blackjacks	22
Other LTL Weapons	11

Reasons For Discontinuance

Reason for Discontinuance	Chemical Irritants	Batons	Flashlights	Electronic Weapons	Blackjacks
Not effective in subduing suspects	68	18	5	9	11
Concern for officer safety	47	21	6	7	7
Problems of reliability	39	8	5	11	9
Concern for public safety	14	8	11	8	11
High costs of restocking supplies	10	1	1	1	0
Excessive number of citizen complaints	6	6	11	1	8
High costs of maintaining devices	4	1	1	1	0
Other reasons	17	32	7	6	8

NOTE: For batons, "Other reasons" were usually training costs and officers' refusal to carry baton.

Survey Results for Jails and Prisons

Survey Methodology

As with the law enforcement agencies, ILJ mailed surveys to the main jail in all counties with populations greater than 250,000 residents and to a sample of 164 jails in counties with populations between 50,000 and 250,000 residents.[5] In addition, a sample of 125 medium and maximum security prisons were selected from the approximately 460 prisons in the United States. With only a few exceptions, the survey questions were the same as those in the police and sheriffs survey. Jail administrators and wardens were asked to provide information on available LTL weapons in their facilities, initial year of acquisition, number of units, annual uses, training requirements, and perceived effectiveness. ILJ received 154 completed surveys from jail administrators (45.4 percent response rate) and 62 surveys from wardens (49.6 percent).

Exhibit 3-6 gives the basic characteristics of the jails and prisons. Small jails had an average budget for 1992 of $3.1 million compared to about $16.8 million for large jails. The budgets for the prisons averaged $14.2 million. All three facility types devoted about two-thirds of their budgets to detention and corrections activities. The rated capacities were 167 inmates for small jails, 632 inmates for large jails, and 1,210 inmates for prisons. The Average Daily Population (ADP) was slightly less than capacity for small jails, but was slightly higher than capacity for large jails and prisons. Finally, the small jails had an average of 40 full-time sworn personnel, compared to 188 sworn in large jails, and 334 sworn in prisons.

Exhibit 3-6
Jail and Prisons Characteristics

	Jails		Prisons
	Small Counties	Large Counties	
Number of Respondents	69	85	62
1992 Budget	$3,100,000	$16,817,000	$14,210,000
Percent of Budget for Detention/ Corrections Activities	64.2%	68.2%	67.2%
Rated Capacity	167	632	1,210
Average Daily Population	144	680	1,251
Full-time Sworn Personnel	40	188	334
Full-time Civilian Personnel	7	47	160

NOTE: All figures are medians.

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[5] These numbers differ slightly from the law enforcement surveys because a few counties did not have their own jail facility, but instead used another county's facility. These counties were excluded from the jail survey.

As reflected in Exhibit 3-6, the average prison is much larger than the average jail, with prisons managing about four times the number of inmates and having about three times the total staff. There are, however, exceptions with jails. The largest responding jail has almost 12,000 sworn personnel and 2,000 civilian personnel, and manages an ADP of 20,000 inmates. The needs of this facility are as great as the needs of most prisons in terms of housing, security, and other areas. The point is that a few large jails dominate the survey results, because of their size. For this reason, Exhibit 3-6 shows median (50 percent) values; the median is selected because it is less influenced by extreme values than the mean. Medians are provided in other tables in this section for the same reason.

Prevalence of LTL Weapons

Exhibit 3-7 provides survey results for LTL weapons from the responding correctional facilities. The category totals show that 62 percent of the jails have impact weapons, 49 percent have chemical weapons, 35 percent have electrical weapons, and 21 percent have other LTL weapons. A higher percentage of prisons have LTL weapons, with 89 percent reporting impact weapons, 97 percent with chemical weapons, 37 percent with electrical weapons, and 61 percent with other LTL weapons. A higher percentage of jails and prisons have electrical weapons than do law enforcement agencies. Thirty-five percent of the jails and 37 percent of the prisons have these weapons, compared to about 25 percent of police and sheriffs departments.

Several individual LTL weapons predominate. For example, about 41 percent of the jails and 73 percent of the prisons have conventional batons. Virtually all prisons have chemical sprays, with CN or CS sprays (74 and 63 percent) currently more popular than OC sprays (45 percent). Chemical sprays available in jails are fairly evenly divided among the three main types (CN at 27 percent of the jails, CS at 20 percent, and OC at 25 percent). Also of interest is that more than half the prisons have weapons for low-lethality projectiles (usually Arwen 37mm rifles), and 18 percent have stunning explosives. These weapons are, of course, intended for use in prison disturbances.

The initial years of acquisition generally parallel the results from the law enforcement surveys. Batons were usually acquired in the 1970s and 1980s. Prisons initially acquired CN and CS sprays in the mid-1970s, and about half have acquired OC spray since 1991. Jails and prisons obtained electrical weapons in the mid- to late-1980s.

Exhibit 3-7
Prevalence of LTL Weapons in Jails and Prisons

	Results from Sampled Jails and Prisons							
	Jails (n=154)		Prisons (n=62)		Jail Year of	Prison Year of	All Jails (N=339)	
Impact Weapons	No.	Percent	No.	Percent	Acquisition	Acquisition	No.	Percent
Conventional Batons	63	40.9	45	72.6	1976	1975	134	39.4
Side-Handle Batons	42	27.3	26	41.9	1985	1984	88	25.8
Telescoping Batons	14	9.1	7	11.3	1991	1990	31	9.0
Heavy Metal Flashlights	14	9.1	15	24.2	1985	1982	25	7.5
Close-Range Impact Weapons	2	1.3	3	4.8	1970	1974	3	0.9
Other Impact Weapons	15	9.7	4	6.5	1988	1985	29	8.6
Departments with Impact Weapons	**95**	**61.7**	**55**	**88.7**			**202**	**59.5**
Chemical Weapons								
Chemical Irritant Sprays/CN	42	27.3	46	74.2	1980	1975	93	27.3
Chemical Irritant Sprays/CS	30	19.5	39	62.9	1984	1977	65	19.1
Oleoresin Capsicum (OC) Sprays	39	25.3	28	45.2	1992	1991	83	24.6
Systemic Chemical Agents (tranquilizer darts)	0	0.0	1	1.6	N/A	1991	0	0.0
Other Chemical Weapons	11	7.1	5	8.1	1990	1981	23	6.7
Departments with Chemical Weapons	**76**	**49.4**	**60**	**96.8**			**166**	**49.0**
Electrical Weapons								
Electronic Stun Weapons	27	17.5	17	27.4	1988	1985	58	17.1
Close-Range Electrical Weapons	13	8.4	7	11.3	1989	1989	27	8.0
Other Electrical Weapons	18	11.7	9	14.5	1990	1988	38	11.3
Departments with Electrical Weapons	**54**	**35.1**	**23**	**37.1**			**116**	**34.4**
Other LTL Weapons								
Weapons for Low-Lethality Projectiles	23	14.9	33	53.2	1986	1974	43	12.8
Physical Pressure Compliance Tools	2	1.3	1	1.6	1986	N/A	4	1.3
Stunning Explosives	13	8.4	11	17.7	1989	1990	21	6.2
Other LTL Weapons	7	4.5	4	6.5	1988	1991	14	4.1
Departments with Other Weapons	**32**	**20.8**	**38**	**61.3**			**62**	**18.2**

Estimates of LTL weapons prevalence in all jails appear in the last column of Exhibit 3-7. We developed these estimates with the same procedure described in the previous section, and the results closely parallel the sampled departments' results. For the total population of 339 jails, we estimate that 60 percent have impact weapons, 49 percent have chemical weapons, 34 percent have electrical weapons, and 18 percent have other LTL weapons. Because of the relatively small sample for prisons (62 responses compared to 420 prisons), we did not attempt to make estimates for all prisons. However, the sampled prisons were randomly selected from all prisons, and the results in Exhibit 3-7 should reasonably apply to all prisons.

LTL Weapon Usage

Exhibits 3-8 and 3-9 give the average number of weapons per facility, annual uses per facility, and effectiveness ratings. In comparison with similar charts for police and sheriffs departments, two differences should be noted. First, both the numbers of units and their uses are significantly lower for correctional facilities than law enforcement agencies. LTL weapons are not always issued to all personnel in correctional facilities; in fact, many facilities keep all LTL weapons in a central armory for use only when needed. Second, the nature of correctional officer responsibilities does not require that LTL weapons be immediately available.

Several respondents commented on the availability and use of LTL weapons:

> Currently, use of LTL weapons is very limited. Deputies working within the confines of the facilities are prohibited from carrying any weapons. The only available weapons are located in the armory. (Sheriff)
>
> No flashlights (except pen lights) are allowed inside the detention facility. Batons are locked in the armory and only handed out by order of the division commander. (Sheriff)
>
> We are one of the largest jail systems in the Midwestern United States, with over 30,000 prisoners processed per year. We firmly believe that effectively training our staff in inmate management and personal communication skills has greatly reduced the need to invest in LTL weapons.
>
> We do not use any special weapons within the jail system. If any problems occur, we will isolate and depend on combined forces of [local police department] and special trained officers from our jail. All officers have training in the use of force, firearms, and baton. (Sheriff)

Exhibit 3-8
LTL Weapon Usage and Effectiveness
Jails

	Number of Jails	Percent (n=154)	Units Per Jail	Annual Uses Per Jail	Effectiveness Ratings of LTL Weapons: Subduing Suspects	Effect on Other Inmates	Officer Safety
Impact Weapons							
Conventional Batons	63	40.9	24.0	2.0	3.9	3.6	3.7
Side-Handle Batons	42	27.3	21.5	1.0	4.2	3.9	4.0
Telescoping Batons	14	9.1	15.0	3.0	3.9	4.0	4.3
Heavy Metal Flashlights	14	9.1	10.0	< 1.0	2.8	3.3	3.6
Chemical Weapons							
Chemical Irritant Sprays/CN	42	27.3	10.0	2.0	3.9	3.5	3.3
Chemical Irritant Sprays/CS	30	19.5	6.0	1.5	4.3	3.6	3.4
Oleoresin Capsicum (OC) Sprays	39	25.3	8.0	5.0	4.5	4.3	4.1
Electrical Weapons							
Electronic Stun Weapons	27	17.5	4.0	6.0	3.9	4.5	4.4
Close-Range Electrical Weapons	13	8.4	5.0	10.0	4.0	4.4	3.9
Other LTL Weapons							
Weapons for Low-Lethality Projectiles	23	14.9	2.0	< 1.0	4.5	3.5	4.5
Stunning Explosives	13	8.4	12.0	< 1.0	4.6	3.9	4.0

NOTE: For effectiveness ratings, the scales were as follows:
Effectiveness in subduing suspects: Very Ineffective (1) to Very Effective (5)
Officer safety and effect on other inmates: Very Unsafe (1) to Very Safe (5)

> The [side-handle] baton has been adopted by our department to quell any type of disturbance. This type of LTL weapon is kept under lock and key, and shall the need to use it ever arise, it will be under the authorization of the sheriff. Another weapon at our disposal is tear gas. This weapon is kept away from our detention center, and several of our officers have been trained in its proper use. (Sheriff)

Because of the relatively low number of LTL weapons in jails and prisons, we developed statistics on an *agency*, rather than on a *sworn personnel*, basis. For example, Exhibit 3-8 provides statistics on average number of units and uses per jail. The highest numbers for LTL units in jails are for impact weapons, with averages ranging from 10 flashlights per jail to 24 conventional batons per jail. Each type of chemical spray (CN, CS, and OC) averages 10 or fewer units per jail; electrical weapons average 4 stun weapons and 5 close-range electrical weapons; and other LTL weapons average 2 low-lethality projectile weapons and 12 units of stunning explosives. Annual uses of LTL weapons are very low, ranging from less than one (for flashlights, projectile weapons, and stunning explosives) to a high of 10 uses per year for close-range electrical weapons.

The averages for prisons (Exhibit 3-9) are higher for units and uses, but still not as high as for law enforcement agencies. Impact weapons lead the way with averages of 50 conventional batons per prison, 36 side-handle batons, 12 telescoping batons, and 22.5 heavy metal flashlights. Of course, not every prison has all types of batons: 25 prisons report only one type of impact weapon, 30 report two types, and the remaining 7 prisons authorize no impact weapons. As with jails, annual uses are low, with eight types of weapons having averages of one use per year or less. OC sprays have the highest use in prisons at 12 uses per year.

Jail administrators and wardens were asked to rate the effectiveness of LTL weapons on three dimensions: effectiveness in subduing suspects, effect on other inmates, and officer safety. The effectiveness scores again ranged from 1 to 5, with higher scores indicating greater effectiveness, fewer citizen complaints, and greater officer and inmate safety. Conclusions from the effectiveness averages are as follows:

- Flashlights generally have the lowest average ratings.
- OC sprays are more effective than CN or CS sprays.
- Projectile weapons receive high scores for effectiveness in subduing suspects and officer safety, but lower scores on effects on other inmates.

Exhibit 3-9
LTL Weapon Usage and Effectiveness
Prisons

	Number of Prisons.	Percent (n=62)	Units Per Prison	Annual Uses Per Prison	Effectiveness Ratings of LTL Weapons: Subduing Suspects	Effect on Other Inmates	Officer Safety
Impact Weapons							
Conventional Batons	45	72.6	5< 1.0	1.0	4.0	4.2	3.9
Side-Handle Batons	26	41.9	36.0	1.0	4.0	4.0	4.1
Telescoping Batons	7	11.3	12.0	< 1.0	4.4	4.3	4.0
Heavy Metal Flashlights	15	24.2	22.5	< 1.0	3.3	3.3	3.8
Chemical Weapons							
Chemical Irritant Sprays/CN	46	74.2	28.0	5.0	3.5	4.1	3.9
Chemical Irritant Sprays/CS	39	62.9	1< 1.0	0.5	3.8	3.7	3.7
Oleoresin Capsicum (OC) Sprays	28	45.2	12.5	12.0	4.3	4.5	4.3
Electrical Weapons							
Electronic Stun Weapons	17	27.4	2.0	1.0	4.1	4.0	4.2
Close-Range Electrical Weapons	7	11.3	3.0	3.0	4.2	4.1	3.9
Other LTL Weapons							
Weapons for Low-Lethality Projectiles	33	53.2	4.0	< 1.0	4.2	3.7	4.5
Stunning Explosives	11	17.7	24.5	< 1.0	4.6	4.2	3.8

NOTE: For effectiveness ratings, the scales were as follows:
Effectiveness in subduing suspects: Very Ineffective (1) to Very Effective (5)
Officer safety and effect on other inmates: Very Unsafe (1) to Very Safe (5)

Exhibit 3-10 summarizes training hours for LTL weapons as reflected in the surveys. These averages are about the same as offered by law enforcement agencies. Baton training usually averages 11 to 12 hours for initial training (except that prisons have less training for conventional and telescoping batons) and 4 to 8 hours for annual retraining; chemical weapons require 4 to 5 hours for initial training and roughly the same amount of time for annual retraining; and electrical weapons average 7 to 9 hours for initial training and 3 to 4 hours for annual retraining. Unfortunately, not enough respondents reported training hours for other LTL weapons, and we could not produce a reliable average; further, only a few surveys gave hours for training by manufacturers on any of the weapons.

Exhibit 3-10
Training for LTL Weapons
Jails and Prisons

	Jail Training		Prison Training	
	Recruit Training Hours	Annual Retraining Hours	Recruit Training Hours	Annual Retraining Hours
Impact Weapons				
Conventional Batons	11.3	6.9	7.7	5.3
Side-Handle Batons	12.0	7.8	12.5	5.5
Telescoping Batons	11.3	3.9	6.0	5.8
Chemical Weapons				
Chemical Irritant Sprays/CN	5.0	4.0	5.3	3.7
Chemical Irritant Sprays/CS	4.5	4.4	4.7	4.9
Oleoresin Capsicum (OC) Sprays	4.2	3.8	4.5	4.2
Electrical Weapons				
Electronic Stun Weapons	7.0	4.1	6.7	3.7
Close-Range Electrical Weapons	9.0	3.3	6.7	3.5
Other LTL Weapons				
Weapons for Low-Lethality Projectiles	N/A	N/A	N/A	N/A
Stunning Explosives	N/A	N/A	N/A	N/A

Selection of LTL Weapons

Jails and prisons also research whether they should purchase a particular LTL weapon, and the surveys provided information on changes over the last few years. Unlike law enforcement agencies, jails and prisons show more interest in electrical weapons, with 22 facilities mentioning recent consideration of these types of LTL weapons. Fourteen facilities are considering OC spray and 12 facilities listed other LTL weapons.

With regard to weapons discontinued in the past five years, 40 facilities listed chemical irritants (see Exhibit 3-11) and 27 facilities listed batons. As with law enforcement agencies, the surveys clearly indicated a preference for OC sprays over CN and CS sprays.

Exhibit 3-11
Types of LTL Weapons Discontinued
Jails and Prisons

Type of LTL Weapon Discontinued	Number of Jails	Number of Prisons
Chemical Irritants	28	22
Batons	15	12
Flashlights	1	0
Electronic Weapons	5	5
Other LTL Weapons	3	4

Reasons For Discontinuance

Reason for Discontinuance	Chemical Weapons	Impact Weapons	Electronic Weapons	Other Weapons
Not effective in subduing inmates	20	8	1	4
Problems of reliability	12	5	3	3
Effect on the facility's environment	17	2	1	0
Concern for the safety of other inmates	15	7	2	1
Concern for officer safety	16	12	2	2
High costs of restocking supplies	3	2	1	1
High costs of maintaining devices	1	3	0	0
Other reasons	13	14	3	1

Chapter 4

Case Studies

ILJ staff visited several law enforcement and correctional agencies to collect more specific information about LTL weapons, including weapon usage, policies, training, citizen complaints, and effectiveness of LTL weapons. This chapter reports on the results of these site visits.

The agencies visited were the following:

- Arlington County, Virginia
  - Arlington County Sheriff's Office
  - Arlington County Police Department
- Los Angeles County, California, Sheriff's Department
  - Custody Division
  - Field Operations Regions
- Dade County, Florida
  - Metro-Dade County Corrections and Rehabilitation Department
  - Metro-Dade Police Department
- Alameda County, California, Sheriff's Department
  - Law Enforcement Division
  - Detention and Corrections Division

The next section gives a brief description of each location. Remaining sections are devoted to five major topics:

- Types of LTL Weapons Available
- Typical Scenarios for LTL Weapons Use
- Policies on LTL Weapons
- Training for LTL Weapons
- Citizen Complaints and Internal Investigations

Agency Descriptions

Arlington County, Virginia

Arlington County, Virginia, is an urban county of about 26 squares miles with a population approaching 175,000 residents. It lies directly across the Potomac River from the District of Columbia. Completion of the Metro (rapid transit line) has fostered the county's economic growth, both residential and nonresidential. Between 1980 and early 1992, the population grew about 14 percent; during the same period, jobs increased by 58 percent.

Virginia sheriffs, as in most states, are elected to office. In Virginia, their term of office is four years and they serve as both civil and criminal law enforcement officers. In addition, they serve as executive officers of the court, providing a range of services to protect and support the courts. Other major activities for Virginia sheriffs revolve around their responsibilities as the counties' chief correctional official. They are charged with the care and confinement of all prisoners in the counties' detention centers.

At the time of the on-site study, the Arlington County Sheriff's Office had a complement of 216 full-time personnel, including 185 sworn, 10 civilian, 18 contract employees, and three others. The sheriff's budget for fiscal year 1992 was about $11.0 million. Detention and correctional activities accounted for about 80 percent of the budget. The detention center has a rated capacity of 164 inmates, but a much higher average daily population of 390 inmates. A new facility is scheduled to open in 1993, with a rated capacity of 506 beds and "shell space" for 144 inmates. In addition to detention, the sheriff offers many services to assist inmates in their return to the community when their detention periods are over.

At the time of the survey, the Arlington County Police Department staff included 319 sworn personnel (230 assigned to patrol) and 78 nonsworn personnel. In fiscal year 1992, the department's operating budget was $26.5 million. The department is organized into three divisions, which provide a broad range of law enforcement services. The operations division includes patrol, traffic control, tactical functions, crossing guards, and parking enforcement. The services division provides crime analysis, crime prevention, control of confiscated or recovered property, and central records. The major crimes division is the primary investigative unit. The remainder of the department includes the chief's office together with the staff support and vice control sections.

Dade County, Florida

Dade County, located on the southeast tip of the Florida peninsula, is bounded by Biscayne Bay and the Atlantic Ocean on the east, the Florida Keys on the south (Monroe County), Everglades National Park on the west, and Fort Lauderdale and Broward County on the north. Dade County covers approximately 2,000 square miles (larger than Rhode Island and Delaware), with about one-third of the county located in the Everglades National Park.

The county's population is more than 1.9 million persons, about half of whom reside in 27 municipalities. The balance live in unincorporated areas of the county. Major cities include Miami, Hialeah, Miami Beach, North Miami, and Coral Gables. The county's 23,000 employees provide a full range of services to residents of the unincorporated areas. In addition, they have many regional responsibilities, including operation of the Port of Miami and Miami International Airport.

The Metro-Dade Police Department, which is the largest law enforcement agency in the southeastern United States, provides basic police services to the unincorporated areas of Dade County, as well as specialized services to the 27 municipal police agencies. The department's strength is 2,698 sworn personnel (883 assigned to patrol), and 1,295 nonsworn personnel. In fiscal year 1992, the department's budget exceeded $237 million.

The Metro-Dade County Corrections and Rehabilitation Department operates seven facilities in the county. Services include pretrial detention, pretrial intervention, substance abuse treatment, medical care, and education. Services are provided to more than 5,000 persons on a daily basis. Most of the department's operations are concentrated in its seven detention facilities: Interim Central Detention Center, Women's Detention Center, North Dade Detention Center, Training and Treatment Center, Metro West Detention Center, Turner Guilford Knight Correctional Center, and Pre-Trial Detention Center. The operating cost of the seven facilities exceeds $54 million annually.

Los Angeles County, California

Los Angeles County, with 8.8 million residents, is the most populous county in the nation. The county encompasses more than 4,000 square miles, making it about twice as large as Dade County, Florida.

The Los Angeles Sheriff's Department has jurisdiction over an area of 3,200 square miles, which includes all unincorporated areas of the county, as well as 42 cities under contract with the department for services. Service is provided to about 2.4 million residents. Total staffing (sworn

and nonsworn personnel) exceeds 12,000 employees, and the department's annual budget is more than $1 billion. The department has five divisions and three field operations regions, each commanded by a division director or regional chief who reports to one of two assistant sheriffs or to the undersheriff. The three field operations regions perform all patrol services, operating from 21 stations located throughout the county, with a total complement of 3,600 sworn and 715 nonsworn personnel. The remaining five divisions are the administrative, court services, custody, detective, and technical services divisions.

The custody division has a similar claim of size, as it operates the largest county jail system in the free world. The division has 10 facilities with a rated capacity of 15,592 inmates, a mandated maximum capacity of 25,395 inmates, and an actual in-custody count of 21,091 inmates on the day of the site visit (February 12, 1993). Staffing of the custody division includes 2,750 sworn personnel, 1,236 civilians, and 576 medical personnel. The custody division budget is about 35 percent of the department's total budget.

Alameda County, California

Alameda County, California, is located along the eastern shore of San Francisco Bay and extends south, abutting San Mateo and Santa Clara counties. It is bounded on the east by San Joaquin County and on the north by Contra Costa County. Alameda County covers 81 squares miles and had an estimated 1992 population of 1,260,000 residents. The 14 cities in the county account for about 90 percent of the total population, with the remaining 10 percent residing in unincorporated areas.

The Alameda County Sheriffs Department is divided into four major divisions: detention and corrections, law enforcement services, county-wide services, and management services. The law enforcement services division provides police, patrol, and security services, and has a total of 273 budgeted positions. The detention and corrections division has custody and control of persons arrested and sentenced inmates. It operates with 670 budgeted positions plus 222 employees who come from other county departments or are contractual employees (medical and food service).

Types of LTL Weapons Available

Exhibit 4-1 summarizes the types of LTL weapons available at the agencies visited for this project. Availability ranges from no weapons (Metro-Dade County corrections and rehabilitation department, not shown in the table) to eight types of weapons for the custody division of the Los Angeles County Sheriff's Department.

Exhibit 4-1
LTL Weapons at Sites

	Arlington County		Los Angeles Sheriff's Dept.		Metro-Dade	Alameda Co. Sheriff's Dept.	
	Police Department	Sheriff's Office	Field Operations	Custody Department	Police Department	Law Enforce-ment Division	Detention and Corrections
Impact Weapons							
Conventional or Long Baton	No	No	No	No	No	Yes	Yes
Side-handle Baton	Yes	Yes	Yes	Yes	Yes	No	No
Shepherd's Crook Baton	No	No	Alternate	Alternate	No	No	No
Heavy Metal Flashlight	Yes	No	No	No	No	No	No
Regular Flashlight	No	No	Yes	Yes	No	No	No
Close-range Impact Device	No	No	Yes	No	No	No	No
Chemical Weapon							
CN or CS	No	No	No	Yes	Yes	Yes	Yes
OC	Yes	Yes	Test	Test	Test	Test	Test
Electrical Weapon							
Taser	No	No	Yes	Yes	No	No	No
Talon	No	No	No	No	No	No	Yes
Other LTL Weapons							
Arwen Weapon	No	No	Yes	Yes	Yes	Yes	Yes
Stinger Devices	No	No	No	Yes	No	No	No
Stunning Devices	No	No	No	No	Yes	Yes	Yes
Yawara Stick	No	No	No	No	No	Yes	No

The Arlington County Sheriff's Office has only side-handle batons and OC sprays. The side-handle batons are for officers who have duties outside the detention facility, particularly the service of civil and criminal warrants. The sheriff's office acquired its batons in 1985 and employs them about twice each year. OC canisters are available to supervisors working in the detention center and to the process officers. Currently, the department has about 100 units of OC in service.

The Arlington County Police Department, founded in 1940, originally supplied all sworn personnel with conventional, straight batons. About 50 units are currently in service, with approximately two uses per year. Some officers carry batons in the trunk of a department-owned or personally owned vehicle. The department does not mandate carrying the baton, but some officers like to have a baton available. In the late 1960s, the department adopted CN as a second LTL weapon. In 1978, the department prohibited the possession of "blackjacks or slapsticks" and, about the same time, adopted side-handle batons. Approximately 200 side-handle batons are currently in service, with about 10 uses per year. A year later, heavy metal flashlights were issued to all sworn personnel, and the department acquired a supply of diversionary devices primarily for SWAT team use.

The most recent change at the department in LTL weapons occurred in November 1990, when the department switched from CN to OC canisters. The department abandoned CN because of concerns about its effectiveness and because of the availability of OC as a more effective product. During 1991, officers used OC spray on 66 occasions, with two of the uses against dogs. The department has encountered no problems with its use of OC sprays.

The custody division of the Los Angeles County Sheriff's Department, with about 20,000 persons processed daily, has found a need to have several types of LTL weapons available for use. The division initially acquired Tasers in 1986 and currently has 34 units in stock, with an estimated use of once each week. At the time of the site visit, the division was in a state of transition with regard to chemical weapons. It has maintained a supply of CS since 1960, but one four-year member of the training staff stated that he could not recall any incidents involving CS and that if it were used, it would have been outside the facility, not inside. Policy prohibits CS use within a facility because of the subsequent need to decontaminate the area sprayed. The division is now testing OC and is awaiting a decision by the California Attorney General to approve its use in all criminal justice agencies.

Impact weapons available at the division include over 3,000 side-handle batons in service and about 100 long batons. The long batons are used in riot situations and in some cell extractions. The custody division also has six Arwen 37mm weapons capable of firing low-

lethality projectiles, with six uses noted annually. Also available at the division are so-called "stinger" weapons, which can be fired from any 37mm gas weapon and are said to be effective for crowd control with few, if any, injuries. A final LTL weapon is a stinger grenade, which is also said to be effective in crowd control situations. The division estimates about 50 uses per year for stinger weapons.

Each custodial facility in the division has its own emergency response team (ERT). The teams can be outfitted, if needed, with riot helmets, vests, batons, and shields. Team members have been trained on all the LTL weapons available in the armory. The division can also call on the tactical response team (TRT) from the department's field operations division for emergency situations. It has been several years since their assistance has been required.

Patrol officers assigned to field operations at the department are issued a side-handle baton and a flashlight. Once on the scene, officers can also gain access to a Taser or an Arwen weapon by calling their supervisor. Patrol sergeants carry both weapons with them while on patrol. When called, a sergeant arrives on the scene and, if required by the circumstances, will deploy and fire the Taser. Several officers indicate that the time delay between calling the supervisor and actual deployment of the weapon is a problem, particularly if circumstances deteriorate during the time the supervisor takes to respond.

The TRT is a major user of LTL weapons–in training as well as at on-scene events, disturbances, etc. TRT is a group of 56 officers divided into four 14-person squads with special capabilities on several kinds of LTL weapons. The following LTL weapons are available to TRT:

- Taser
- Arwen weapon
- Sting ball
- Gas grenades fired by a 37mm gas projectile weapon
- Foam rubber baton rounds, also fired by a 37mm projectile weapon

Looking to the future, TRT is experimenting with two so-called "bean bag" projectiles. A small bean bag can be fired by a shotgun and will disable a person at close to medium range (10 to 20 yards). A larger bean bag can be fired from the Arwen weapon with a range up to 50 yards. TRT is also awaiting approval of OC for use in situations where it would represent the least harmful alternative. For example, OC may be used to subdue a person who cannot be disabled by CS or even by a Taser because of substance use (particularly PCP) or some other circumstance.

The Metro-Dade County Corrections and Rehabilitation Department does not currently use any LTL weapons. Their only uses of LTL weapons in the past 20 years occurred between

1974 and 1985. In 1974, they quelled a disturbance in the "stockade"–a former U.S. Army barracks used for training and treatment–with the help of chemical weapons and the Metro-Dade Police Department. In 1985, a disturbance in the Pre-Trial Detention Center in downtown Miami was similarly put down with the use of chemical weapons and police department assistance. In 1989, a corrections officer with military training in chemical weapons was asked to search all the agency's facilities and to destroy all chemical weapons whose shelf life had expired. An agency spokesperson says no LTL weapons have been purchased since that time.

It should be noted, however, that all correctional officers are issued handcuffs and have been trained in defensive tactics. Cell extractions sometimes call for officers wearing helmets and carrying metal or plastic shields; neither item can be classified as an LTL weapon. When transporting inmates out of a facility, correctional officers are equipped with a side arm pistol. The department is also planning to create its own special response team, which is tailored after a similar unit in the police department and is expected to be operational by the end of 1995. The unit will probably be equipped with several LTL weapons.

The Metro-Dade Police Department used chemical devices, including CN and CS, as early as 1958. CN was phased out in 1980, but CS is still in use, with about 1,500 canisters or other containers in stock. OC was first obtained in 1988 and is currently in a test mode. The department's special response team (SRT) uses OC about 15 times per year. SRT also acquired a product in 1984 that is said to be a combination of OC and CS, with about 12 canisters in stock. This product is used approximately 15 times per year.

The department first acquired conventional batons in 1965, but these were phased out after side-handle batons were issued in 1982. Approximately thirteen 37mm gas projectile weapons (smooth bore) are in the department and are used about 10 times per year. Stunning explosives, used for diversion, are also maintained in the inventory. Electrical weapons have never been used in the department.

The Alameda County Sheriff's Department, like many other law enforcement and correctional agencies, uses the straight baton (their version measures about 26 inches in length). Their records indicate that deputies were armed with batons during the 1940s. It was common at that time for officers to carry saps, blackjacks, and billy clubs, and deputies may have provided their own weapons before batons were issued. Some department members used saps and billy clubs until the 1970s, when their use was prohibited. It is said that lawsuits and subsequent settlements and awards paid to injured parties drove the change in policy.

During the 1960s, the department acquired chemical weapons, primarily CN and CS, in support of the Berkeley Police Department's efforts to control anti-war demonstrators at the

university. The decision to acquire chemical weapons was also driven by demonstrations at the Lawrence Livermore Laboratories, located in an unincorporated area of the county, since the sheriff is responsible for these areas.

In the early 1970s, the department acquired weapons that fire low-lethality projectiles. The Alameda County Sheriff's Department maintains a supply of various projectiles in both jails (North County and Santa Rita) as well as in the vehicle assigned to its Special Response Unit (SRU). Supervisors' vehicles in the law enforcement division carry a limited supply of projectiles and a firing weapon. In the 1970s, the department also acquired stunning explosives, which are maintained in the two jails and in the SRU vehicle.

In 1978, the department authorized use of the Yawara stick for members of the department who are trained in and feel comfortable with its use. Only about 10 officers currently have this weapon. Finally, in 1986, Talon weapons were obtained primarily for use in the jails, and the department currently has abut 20 Talon weapons in stock. At the time of the site visit, the department was testing OC sprays and awaiting the decision previously mentioned from the state's Attorney General to authorize use of OC.

Typical Scenarios for LTL Weapons Use

Agency personnel at the sites related many incidents where LTL weapons proved valuable. From the visits, it is clear that batons are the LTL weapons most frequently used by police officers and deputies. Use varies according to the situation, but the usual objective is to restrain a suspect or gain control of a person confronting an officer. The baton is most useful in one-on-one situations, where it can be used to strike or push a person who is not complying with a lawful request. In correctional situations, the same types of scenarios occur when inmates "square off" against a correctional officer who has issued an order.

Police and correctional officers use chemical weapons in much the same manner against individuals who are particularly aggressive. The disadvantage of these weapons is the time it takes to draw and activate the canister. When an officer has the time, however, chemical sprays have proven particularly effective.

The following are just a few of the many examples from the sites on the use of OC spray:

- In Arlington County, a man with a history of mental problems was barricaded in his parents' home. In a previous encounter with a neighboring police department, subduing the man required four officers, three of whom later needed medical attention. Arlington police officers were able to spray OC on the subject after he

resisted arrest when the SWAT unit entered the house. He was rendered immobile and the arrest was made without harm to him or the officers.

- At an oversold rock concert in Arlington County, several people who were left at the entrance to the hall nearly precipitated a riot. Police sprayed OC in the entrance hall and the area was quickly evacuated.
- A pit bull was rendered harmless and easily restrained by the use of OC spray.

The Arlington County Sheriff's Office noted that their use of OC almost always occurs in the booking area–typically on busy weekend nights when unruly arrestees must be restrained before the booking process can continue.

A memorandum from the chief of police at the Arlington County Police Department notes four major advantages of using OC in lieu of CN/CS:

- OC's effects occur faster and more intensely.
- Officers experience very little, if any, discomfort when using OC.
- OC works on a wider variety of individuals (such as persons who are on drugs or alcohol or who are emotionally disturbed) and is also effective on animals.
- Complete decontamination is achieved in a short period of time.

Other LTL weapons are used in more specialized situations. Correctional personnel generally favor the Taser in one-on-one cell extractions, and they find the Taser effective even with persons who have mental problems. They prefer not to use the Taser if the inmate is armed because of the close proximity required by the Taser, nor do they use it if the inmate is high on PCP or similar substances. Deputies in field operations at the Los Angeles County Sheriff's Department also report the use of the Taser in close-in, one-on-one situations, most of which involve an unarmed arrestee who is reluctant to move on to a booking site or detention facility. A TRT supervisor relates that an Arwen projectile was used to disable an armed person bent on suicide who represented a significant threat to himself, the community, and the many police personnel in the area.

Comments from the weapons training unit (WTU), part of the Los Angeles County Sheriff's Department field operations, summarize a common view about the effectiveness of the Taser:

> The Taser is effective, but it is not effective on everybody. A person with multiple layers of clothing can deflect the darts and keep them from registering on the skin. When the two darts are registered, some people are incapacitated; others experience little or no effect. Persons high on drugs sometimes cannot feel the electricity and, therefore, are not affected. The department estimates 87 to 89 percent effectiveness, but the remaining 11 to 13 percent is of concern.

During another interview, a WTU member praised the Taser under certain conditions. He reports that the Taser has worked well in controlled situations, when the subject is alone, is not armed, and does not appear heavily under the influence of a drug or other controlled substance.

Two other specific instances for LTL weapons are worthy of mention. The Arlington County SWAT team used a diversionary device to facilitate safe entry into a crack house, where residents were known to be armed and dangerous. Members of the custody division of the Los Angeles County Sheriff's Department have found diversionary devices to be effective in breaking up disorderly groups of inmates. Use of grenades has, therefore, proven useful in different types of police and correctional situations.

Finally, several site personnel commented that the *appearance* of an LTL weapon is sometimes enough to calm a situation. Field operations personnel at the Los Angeles County Sheriff's Department report that displaying an Arwen weapon in a one-on-one situation or in front of a modest-sized disorderly group sometimes precludes the need to load and fire the weapon. Similar experiences have occurred with batons, OC sprays, and other LTL weapons.

Policies on LTL Weapons

All the departments visited had written policies and procedures on their LTL weapons. This section summarizes the main aspects of these policies. Chapter 6 of this report contains a more extensive discussion of LTL weapons policies.

The Arlington County Sheriff's Office has extensive policies and procedures that cover most contingencies in the use of OC sprays, side-handle batons, and flashlights. The policy manual, Section O-901, *Weapons Regulations*, covers all weapons in the department, and includes references to specific LTL weapons. The manual states:

- No employee shall carry or use OC sprays or any other weapon unless trained and certified in its use. Moreover, recertification on an annual basis is required.
- Ammunition and chemical agents may be carried by police officers or employees in the booking area but nowhere else in the facility unless there is an emergency.
- Chemical agents and other security devices must be stored in the agency's armory.
- Carrying or using any of the following weapons is prohibited: nunchakus or other martial arts instruments, stun guns, lead-filled or reinforced gloves, brass knuckles, blackjacks, or slapsticks.
- Employees are admonished that flashlights are not issued as weapons. Their use as a weapon is only in defense of the employee's life or life of others.
- OC sprays or similar chemical agents shall be office issued and may not be used except when personal injury or injury to others is imminent. Prompt medical attention is required of all persons subjected to OC sprays or other chemical agents.
- Discharge of any chemical agent requires a written report to the sheriff.

Following these regulations, which pertain to all LTL weapons, are sections on force (Section O-902), deadly force (Section O-903), uses of physical restraints (Section O-904), and use of OC spray in the detention center (Section O-905).

The Arlington County Police Department has issued several directives that provide policy on LTL weapons, as summarized by the following:

> *Policies applicable to all LTL weapons*: Directive 413.21 prohibits employees from carrying or using, except under exigent circumstances, "any instrument as an offensive or defensive weapon not specifically authorized or issued by the department." The department does not require a routine report on each use of LTL weapons.
>
> *Policies on batons and flashlights*: Use of batons and flashlights is not considered an application of LTL force if they are employed to deliver an "intentional blow to the head or spinal column of an individual" (Directive 413.10). Such blows are considered an application of deadly force.
>
> Directive 413.24 states that employees are not to use department-issued batons or flashlights until satisfactorily completing "a defensive baton and flashlight training course certified by the department." Upon exiting their vehicles, officers are given discretion on whether to take their batons and flashlights. A related policy (Directive 413.22) prohibits employee possession or use of a blackjack or slapstick.
>
> *Policy on stunning explosives*: Use of stunning explosives, which are issued to the SWAT team only, is normally authorized only against felons believed to have immediate access to weapons.
>
> *Policies on OC/CN/CS*: Directive 413.23 requires employees to receive instructions on the proper use of OC before using it and to use it only "to reduce or discontinue the threatening or combative activity of an arrestee or an individual subject to arrest." Department policy is to replace OC canisters when they are less than one-third full, as determined by periodic weighing on an electronic scale. Employees are not to use CN and CS "except as directed by a supervisor, and provided the employee has been trained in the proper use of the chemical agent." (Directive 413.23). Unlike the medical policy for OC, officers are directed by a chief's memorandum that any individual exposed to CN or CS shall be regarded as "in need of immediate medical attention and shall be taken to the closest hospital for physical examination." As previously noted, the department discontinued the use of CN in 1990, and CS is reserved for use only by the SWAT team.

Personnel at the Los Angeles County Sheriff's Department custody division are guided by two sets of policies regarding LTL weapons. First, departmental policies are included in the agency's *Manual of Policies and Procedures* (MPP). Second, sections of the *Custody Division Manual*, recently prepared and approved, pertain to special weapons.

A use of force policy statement (MPP 3-02/030.20) provides a foundation for all other policies related to LTL weapons. Central to the policies are definitions of "necessary force" and "reasonable force," followed by definitions of "unnecessary force" and "unreasonable force." The policies require that any member using force report it to his or her supervisor as soon as possible. Subsequently, notifications and reports are to be sent through channels.

Within the *Emergency and Disaster Section* of MPP 5.06/020.60, three subsections are highlighted for training custody division personnel. The first is "Crowd and Riot Control"–reminding officers that all rules and regulations are in effect, especially with regard to use of force and use of a firearm, despite riot conditions. The second is "Tactical Operations," which spells out why agency resources are deployed–to accomplish specific objectives, including containment, isolation, and dispersal. The third subsection is "Force Measures," which sets forth gradations of force that should be considered when dealing with crowd or riot situations. The five gradations of force are show of force, crowd control formations, batons, chemical agents, and firearms.

During our visit, policies for personnel at the Los Angeles County Sheriff's Department Field Operations were said to be temporary, as the department had embarked on a major effort to rewrite its use of force policies and procedures. In the interim, use of LTL weapons is guided by the department's existing use of force order (MPP 3-01/030.20), which defines four aspects of force: necessary force, reasonable force, unnecessary force, and unreasonable force. With reference to LTL weapons, the order states:

> Members shall employ appropriate defensive and control techniques, including the use of departmental approved equipment and devices. Intentional head strikes with any impact weapon are specifically prohibited unless circumstances justify the use of deadly force. In considering the use of deadly force, department members shall be guided by reverence for human life.

With the use of force order as a base, department members will be guided by training division lesson plans as they pertain to existing LTL weapons. The new use of force directives are expected to address in detail the use of LTL weapons.

Metro-Dade Police Department policies define "use of force" and "nondeadly force" in preparation for specific policies with regard to side-handle batons and use of chemical agents. The term *use of force* is defined in the following manner (Volume 1, *Policy*, Section 1.225):

> Officers are confronted with situations in which control must be exercised to effect arrest or to protect public safety. Control may be achieved through advice, warning, persuasion, or by physical force. While use of force may be necessary, all reasonable alternatives should be exhausted or

be inappropriate under the circumstances. An officer may use that force which he reasonably believes necessary to defend himself or others from bodily harm.

Administrative Order 2-34 defines *nondeadly force* as:

> A quality or quantity of force which is neither likely nor intended to cause death or serious physical injury. Nondeadly force normally includes the use of physical strength or skill, or the use of mace, side-handle baton, Lateral Vascular Neck Restraint (LVNR), or any other approved weapon.

Additional regulations, codified in Administrative Order 2-34, refer to specific side-handle batons and chemical agents, as excerpted below:

> Side-handle Baton: The baton will be carried only by personnel who have completed approved training in its use. Personnel are required to demonstrate proficiency annually in the use of the baton.
>
> Chemical Agents:
>
> a. *Authority to Employ*: The decision to employ CS or smoke is the responsibility of the on-scene commander.
>
> b. *Use of Chemical Agents*: No tactical advantage is realized by indiscriminate use of chemical agents against non-combative persons. Chemical agents will not be used until all other reasonable efforts to control an incident have failed.
>
> c. *Smoke Grenades*: Smoke may be employed to disperse a crowd.
>
> d. *Projectiles*: Projectiles are designed to deliver chemical agents in containers that can be fired from gas guns or 12-gauge shotguns. The muzzle velocities of these projectiles enable them to penetrate windows, doors, and room partitions. Therefore, chemical agent projectiles shall not be fired directly at any person.
>
> e. *Chemical Agents as a Substitute for Firearms*: Chemical agents are not intended to be a substitute for other weapons in situations in which the use of other weapons is more appropriate.
>
> f. *Approved Chemical Agents*: Officers shall carry only chemical agents which have been approved by the Department.
>
> g. *Reports*: Appropriate reports shall be completed whenever a chemical agent or weapon is employed or threatened.
>
> h. *Duration*: The duration of application of chemical agents shall be limited to that required for effective control.
>
> i. *First Aid*: When a chemical agent has been applied, first aid shall be administered as soon as practicable.

The Alameda County Sheriff's Department employs three kinds of directives to express its policies. *General orders* are issued by the sheriff and are applicable to all divisions, units, and personnel (sworn and nonsworn). *Special orders* may be issued by a division commander and are applicable to all units and personnel working in the affected division. *Policies and Procedures* are issued by a facility or unit commander, usually a captain, and apply to all members of the unit or facility.

The department has a general order pertaining to the use of deadly force (Order 89-03); there is no companion order that covers LTL force or LTL weapons. However, a use of force general order, in draft form at the time of the visit, covers deadly force as well as LTL force with respect to weapons and related topics. The draft order reiterates the prohibition on "small billies and short batons" as optional weapons. When the order is completed and issued by the sheriff, the agency will have a single order for the entire department.

Training for LTL Weapons

It is standard procedure in all law enforcement and correctional facilities to provide training on lethal and LTL weapons. Training is always provided during recruit classes, although the amount and type of training varies considerably, as discussed below. All agencies also require annual retraining on LTL weapons, again with significant differences in the extent of training.

Recruits for the Arlington County Sheriff's Office are trained at the Northern Virginia Criminal Justice Academy. Training on LTL weapons totals two hours, and is mostly devoted to OC sprays. Annual refresher training is required, as noted in the introduction to Section O-901, *Weapons Regulations*. Recruits for the Arlington County Police Department are trained at the same facility, but receive more than 22 hours training on LTL weapons. Twelve hours are devoted to conventional and side-handle batons; eight hours to defensive tactics, including the heavy metal flashlight; and two hours to chemical weapons, principally OC sprays. After this instruction, recruits receive training on department directives, including use of force as well as LTL weapons. Topics covered include deadly force, physical force, use of weapons, chemical agents, and batons and flashlights.

Annually, all sworn members receive eight hours of in-service training on defensive tactics. Topics covered include the following:

- Defensive tactics: basic principles and fundamentals (one hour)

- Self-defense/active countermeasures (two hours); topics covered include blocks, grabs, body and head blows, chokes, knife defense, weapon retention and takeaway, and chemical agents
- Handcuffing and searching (two hours)
- Intermediate weapons (two hours); the baton is featured as the "intermediate weapon" that is used between "minimal force" and "maximum or fatal force"
- Civil liabilities and defensive tactics (one hour)
- Review of a videotape on OC sprays together with appropriate comments (10 minutes)

At the custody division of the Los Angeles County Sheriff's Department, weapons training is divided into two parts, with one part for deputies and the other for sergeants and lieutenants. Training is conducted when members are transferred into the division. During the week-long command school for sergeants and lieutenants, attendees are familiarized with all authorized weapons. The training focuses on *when* to deploy, rather than on *how* to deploy. Weapon uses are explored within a context of situations in which they can be used. Policies and procedures are also emphasized, particularly as they govern deployment and use options.

Training for deputies focuses on *how* to use LTL weapons, since they will be called on to deploy all but one of the weapons. During a 16-hour training class for special weapons, deputies are certified in the use of the Arwen weapon (four hours), Taser (four hours), stinger grenade (two hours), and stinger cartridge (two hours). The remaining four hours are devoted to policies and procedures. An 8-hour emergency procedures class trains deputies to fire each of the weapons. The lieutenant in charge of training notes that because the deputies work in the jail for only about three years, there is no LTL weapons refresher training. Such training is available at the patrol training school upon transfer from custody to patrol. All training is coordinated with the state Police Officer Standards and Training (POST) Commission and with the Standards for Training in Corrections (STC).

Deputies at the Los Angeles County Sheriff's Department receive training at the recruit training academy in how and when to use LTL weapons. In addition to introductory courses, recruits take a 12-hour course on the side-handle baton that leads to certification; and with division chief authorization, deputies may be allowed to carry the Handler 12 baton upon completion of a 16-hour certification course. Officers assigned to patrol must take a four-hour refresher training session on the side-handle baton once a year, or a 4-hour refresher training session on the Handler 12 twice a year.

There is no separate training requirement for the flashlight. All impact weapon training is presented in side-handle baton or Handler 12 training sessions. Sergeants assigned to patrol attend a 40-hour training session that includes four hours of training on an Arwen weapon and four hours on the Taser. After the recruit academy, most patrol officer training is conducted at

the department's academy by advanced officer training staff, or is presented at the member's district station and coordinated by the station's training sergeant.

Training for personnel at the Metro-Dade County Corrections and Rehabilitation Department is required by the Florida Department of Law Enforcement and its training subsidiary, the Criminal Justice Standards and Training Commission. Two blocks of instruction presented to recruit personnel at all certified training facilities touch on LTL weapons:

- In the criminal justice defensive tactics block of instruction, which is presented in a minimum of 66 hours, a recruit receives instruction in "impact weapons." The learning goal is presented this way: "The student will know impact weapon tactics."

- In a block of instruction entitled "Criminal Justice Weapons," there is a section on chemical agent use. All recruits receive training to ensure that "the student will know chemical agent terminology and comprehend chemical agent types, exposure symptoms, first aid and decontamination procedures, dissemination methods and factors influencing effectiveness and use of agents. The student will demonstrate procedures for donning a gas mask."

Because the department does not issue LTL weapons, it emphasizes other tactics for dealing with inmates. On several occasions during on-site interviews, personnel used the acronym "IPC," which stands for *interpersonal communications*. Department leaders, including the director, assistant director for operations, and several facility supervisors, spoke about the importance of IPC in keeping the peace without LTL weapons. A good deal of training is directed toward IPC between the on-floor correctional officers and inmates. The facility's physical layout certainly has a strong influence on keeping the peace, but department personnel are convinced the key element is IPC.

The Metro-Dade Police Department Training Bureau has responsibility for LTL weapons training, including recruit and annual refresher training. The bureau also has responsibility for research and evaluation of LTL weapons. Although the state mandates 520 recruit training hours, the area police academy, the Miami-Dade School of Justice and Safety Administration, provides recruits with an 840-hour curriculum. Recruits receive 66 hours of defensive tactics training, including instruction on side-handle batons, defense tactics, and firearms training. Following recruit training, all recruits are brought back to the department for a three-week riding assignment followed by five weeks of agency-specific training. This training includes approximately 40 hours on chemical agents, defensive tactics, and firearms.

After graduation, each officer is given an additional two weeks of training that includes 40 hours of state-mandated training (required for police officers every four years) and 40 hours of case preparation and courtroom training. Annual training for all sworn personnel includes two

hours of retraining and retesting on the LVNR technique and on the side-handle baton. Positive test results are necessary for recertification.

Training at the Alameda County Sheriff's Department is overseen by the California POST (Police Officer Standards and Training) and the California STC (Standards for Training in Corrections). POST mandates 560 hours of basic training for newly recruited deputies, but the sheriff's department provides 880 hours. Included are hours on the use of the baton, chemical weapons, Yawara stick, and other related topics. POST mandates 24 hours of refresher training, known as the Advanced Officer Course (AOC), every two years for all law enforcement personnel. Half the course is devoted to a tactical handgun course, civil liability update, and weaponless defense. The Alameda County Sheriff's Department conducts its own AOC program in the intervening years, with each deputy individually tested on the use of the baton.

On the correctional side, all deputies who pass their probationary period are assigned to the training academy, where they take a 56-hour course called "Jail Operations." They are then assigned to one of the jails for a period of time that depends, in part, on how many deputies are hired in a succeeding time period. STC funding is set aside for each agency's jail employees to receive 24 hours of training in subjects specified by the agency, within an AOC framework. Department training personnel indicated that the AOC training includes an emphasis on LTL weapons.

Citizen Complaints and Internal Investigations

The Metro-Dade Police Department reports some citizen complaints involving the side-handle baton; however, these complaints have not led to litigation. In addition, the Metro-Dade Police Department did not have any reports of misuse or litigation involving other LTL weapons it used for the three-year period ending September 30, 1992.

The Arlington County Sheriff's Office has been fortunate in not having any complaints (as of early December 1992) about any LTL weapon use, nor has the agency been the subject of any legal action because of LTL weapons. The Arlington County Police Department, during the three-year period ending November 1992, had not been involved in litigation related to LTL weapons. However, during that period, the internal affairs section investigated two incidents involving LTL weapons, one with OC spray (initiated internally by a supervisor) and one with a metal flashlight Both complaints were sustained and the officers received disciplinary actions.

The Los Angeles County Sheriff's Department Custody Division reports that only a few complaints have been made by inmates with regard to LTL weapons. These few complaints

concerned the Taser and sting balls. The division reports that Arwen projectiles have caused injuries to inmates, but because the incidents were riot situations, no complaints or lawsuits were filed. At the time of the site visit, a disposition was pending on the only known lawsuit involving a Taser.

Complaints at the Los Angeles County Sheriff's Department Field Operations usually involve flashlights, batons, or Tasers. There are about 20 complaints per year, with flashlights accounting for about half, and the remaining complaints split between batons and Tasers. Statistics show that the units to which officers are assigned investigate about 80 percent of the complaints, with the Internal Affairs Bureau (IAB) involved in the other 20 percent. IAB generally investigates the more serious incidents.

Specific comments on LTL weapons include the following:

- Flashlight investigations are difficult to sort out because flashlight use tends to be impulsive.
- Baton use tends to be more deliberate (possibly in line with training mandates).
- Taser use is deliberate inasmuch as a sergeant brings the weapon on scene, sets it up, and fires it. That allows more than enough time to consider the consequences as well as alternatives.
- The baton and Taser are easier to assess because more thought and reflection enter into decisions to use them. Few incidents are classified as involving misconduct.
- Other LTL weapons have not yet appeared in complaints.

The other agencies visited for this project did not maintain accurate records on the number of investigations that specifically involved LTL weapons. All the agencies have procedures for handling complaints from citizens and inmates, including complaints about the use of an LTL weapon. All inquiries into complaints follow the same steps, whether or not an LTL weapon was involved.

Exhibit 4-1
LTL Weapons at Sites

	Arlington County		Los Angeles Sheriff's Dept.		Metro-D
	Police Department	Sheriff's Office	Field Operations	Custody Department	Police Departme
Impact Weapons					
Conventional or Long Baton	No	No	No	No	No
Side-handle Baton	Yes	Yes	Yes	Yes	Yes
Shepherd's Crook Baton	No	No	Alternate	Alternate	No
Heavy Metal Flashlight	Yes	No	No	No	No
Regular Flashlight	No	No	Yes	Yes	No
Close-range Impact Device	No	No	Yes	No	No
Chemical Weapon					
CN or CS	No	No	No	Yes	Yes
OC	Yes	Yes	Test	Test	Test
Electrical Weapon					
Taser	No	No	Yes	Yes	No
Talon	No	No	No	No	No
Other LTL Weapons					
Arwen Weapon	No	No	Yes	Yes	Yes
Stinger Devices	No	No	No	Yes	No
Stunning Devices	No	No	No	No	Yes
Yawara Stick	No	No	No	No	No

Chapter 5

Civil Law Liability Review of Less Than Lethal Weapons

Introduction

Police use of force has always been a significant public policy issue. Recent incidents in Los Angeles[1] and Detroit[2] have placed the issue conspicuously in the public view. Public debate about police use of force has often centered on the use of deadly force, rather than on the more frequent uses of force that make up the typical officers' and citizens' experience. Outside of the public debate, law enforcement agencies have undertaken a variety of actions to reduce incidents of excessive force among their members. These include improving training, increasing reporting requirements, improving disciplinary procedures, and other areas. One of the more innovative approaches is to increase the use of less than lethal (LTL) force weapons among police officers to limit the need to resort to deadly force. Some LTL weapons have been available for decades (e.g., batons), but have never been systematically examined as LTL weapons. Others (e.g., mace) have been introduced only in the past 20 to 30 years to serve as an alternative to deadly force.

One factor inhibiting greater adoption of LTL weapons is the uncertainty about potential legal liability that may accompany LTL weapon use or misuse. This review, which is limited to *civil law* issues, will address the liability issues relating to the use of the most commonly available LTL weapons. These are primarily "resistance-arresting" devices and include

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1 The Rodney King beating incident is perhaps the most publicized example of police excessive force, generating over 300 news articles in one database examined as of February 1993. The initial report of the incident was published in the *New York Times*, 6 March, 1991, Section A, p. 18.

2 In November 1992, four police officers were charged in Detroit, Michigan, with fatally beating a man to death with a flashlight when he refused their orders to cooperate. *New York Times*, 7 Nov. 1992, Section I, p. 7.

electronic stun devices (e.g., tasers), chemical weapons (e.g., mace), and close-range impact weapons (e.g., flashlights and batons).[3]

Legal liability from the use of LTL weapons can affect police and public officials at all levels. For example:

- Law enforcement/correctional officers require guidance on when and how to use LTL weapons to avoid unintentional injuries to others.
- Law enforcement/correctional supervisory personnel require guidance on the best ways to direct and train line personnel in the use of LTL weapons and how best to monitor their use.
- Law enforcement/correctional managers require guidance in setting policy about the adoption and use of LTL weapons.
- Municipal/state governmental bodies require the same policy guidance as managers but also need information on the value of earmarking appropriations for LTL weapons. These governments may be ultimately responsible for the outcomes of the use and misues of LTL weapons.

At each of the above levels, the fear of potential legal liability can inhibit the adoption or use of LTL weapons. This fear can be reduced with a planned and gradual transition to the proper use of LTL weapons, increasing familiarity and experience with the weapons, and guidance from the agency's local legal advisor.

The advent of LTL weapons may change the policy context and the rules for legal liability applied to any use of force by law enforcement or corrections, but especially that of deadly force. What may have been permitted in the past may now be viewed as inappropriate and excessive force. Thus the need for a firm understanding of the legal principles applicable to the use of LTL weapons and other uses of force.

The next part of this analysis examines and summarizes the general legal principles applicable to peace officer use of force. This includes both state and federal law practices. The

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3 Other types of LTL weapons include (1) detached impact weapons (water cannon, low-lethality projectile guns that use plastic bullets) and (2) miscellaneous devices (e.g., nets, pressure compliance devices, and stunning explosives). See generally, J. P. Jamieson, R. Hull, and P. Battershill, *Recommendations of the Committee on the Use of Less Than Lethal Force by Police Officers in British Columbia* (British Columbia Police Commission, July 1990). See also, Lawrence C. Trostle, "The Force Continuum: From Lethal to Less-than-Lethal Force," *Journal of Contemporary Criminal Justice* .6(1990): 23.

third section of the chapter illustrates how these principles are applied to LTL weapon use. Chapter 7 Contains the recommendations for policymakers and agency heads to limit their exposure to legal liability claims related to LTL weapon use.

Legal Principles Governing Peace Officer Use of Force

The legal principles applicable to LTL weapons are derived from general principles of law governing peace officers' use of force. These include common law, state statutory law, and federal constitutional law.

Common Law

The intentional use of force by an individual upon another person is at common law is a battery.[4] One exception to the offense of battery is when force is used to make an arrest for violation of the criminal law. This exception permits peace officers to use *reasonably necessary* force in making an arrest, recapturing an escapee, or maintaining custody of a prisoner.[5]

At common law, deadly force may be used by peace officers making an arrest *for a felony* when the officer believes such force is necessary to effect the arrest.[6] No distinctions are made between differing felony charges.[7] An officer may also use deadly force in self defense when making an arrest for any charge when the arrestee first uses deadly force in resisting arrest.[8] The key factor in either use of deadly force is that the officer must reasonably believe that such force is necessary–that there are no other reasonable alternatives to deadly force in the situation.[9]

To retain the privilege for using force, the force used must be to either effect these lawful purposes or overcome unlawful resistance.[10] Excessive force is not privileged. The test for

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4 RESTATEMENT (2d), TORTS, § 18. The RESTATEMENT (2d) OF TORTS (St. Paul, Minnesota, 1965), developed by the American Law Institute, is considered an authoritative general source on the law of torts.

5 RESTATEMENT (2d), TORTS, § 118 et seq.

6 RESTATEMENT (2d), TORTS, § 131.

7 Historically all felonies at common law were subject to the imposition of the death penalty. Thus, the privilege to use deadly force to make an arrest of a felon was equally applicable to all felonies. See American Law Institute, MODEL PENAL CODE AND COMMENTARIES: PART I GENERAL PROVISIONS (Philadelphia, 1985), § 3.01 to 5.07, Commentary on deadly force, § 3.07(c)(i) at p. 113.

8 *Id.*, Comment d.

9 *Id.*, Comment f.

10 RESTATEMENT (2d), TORTS, §§ 118, 121. Similarly, RESTATEMENT (2d), TORTS, § 127 provides that the privilege to arrest another ceases if the arrest is made solely for a purpose other than that relating to the administration of criminal justice.

excessive force is also whether the officer *reasonably* believed such force to be *necessary*.[11] Factors to consider in determining the reasonableness of the force used are the nature of the offense charged, opportunity for escape, and the known character of the arrestee.[12] The use of excessive force by a peace officer may result in civil liability for torts, including battery, false imprisonment, and wrongful death.

Supervisory and Governmental Liability

Supervisors may also be liable for injuries caused by their subordinates that are partially caused by the supervisor's own actions or negligence. For example, liability may result when a supervisor issues a directive that requires a subordinate to use excessive force. A more common type of liability is negligence in the exercise of supervisory responsibility. For example, a supervisor assigns an officer to a post or responsibility for which the officer is untrained and at which the use of force can be reasonably foreseen.

Employers are generally liable for the tortious actions of their employees that are committed for the benefit of the employer.[13] This doctrine of *respondeat superior* provides that one measure of employer benefit is whether the employee was acting within the scope of his or her employment.[14]

One exception to these agency principles exists where the employer is the government. At common law the state can do no wrong. Government may not be sued for injuries caused by the state. This is the doctrine of sovereign immunity.[15] Not all governmental bodies are protected by sovereign immunity, even at common law. Thus, governmental bodies not protected by the sovereign immunity doctrine are potentially liable for the actions of their employees or agents done in the scope of their employment. State legislation has replaced common law principles of sovereign immunity in virtually all states. These laws typically control the manner and place in which suits may be brought against governmental bodies. They may also limit the extent of damages that may be claimed from a common law action against a governmental body.

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11 RESTATEMENT (2d), TORTS, §132. Reasonableness is a question of fact. It is a jury decision whether a peace officer's actions were reasonable or not.

12 *Id.*, Comment c.

13 RESTATEMENT (2d), AGENCY, § 215.

14 RESTATEMENT (2d), AGENCY, § 219.

15 RESTATEMENT (2d), TORTS, § 895 B, C, D. See *infra* notes 51-618 and accompanying text.

Suits against government do not release individual liability. In the absence of an indemnification statute, individuals remain liable for their torts committed as employees within the scope of their employment, including both intentional and negligent torts. Torts committed in a private capacity, outside the scope of employment, are the sole responsibility of the employee. Sovereign immunity is not a relevant defense where agency principles do not allow *respondeat superior* liability.

Third-Party Injuries

The use of force by a peace officer against an offender may result in injuries to innocent third parties. This is most likely to occur where deadly force is used by the officer. The common law rule is that police have a continuing privilege to use deadly force where there is little or no probability of injury to a third party.[16] Third parties who receive slight injuries cannot complain where the minor injury occurred as a result of a peace officer's lawful actions.[17]

State Statutory Law

State legislatures have enacted statutes governing police use of force. All but seven states have enacted legislation detailing under what conditions law enforcement officers may use force incident to arrest.[18] Among the remaining 43 states, two types of laws are found–codification of the common law and variations on the *Model Penal Code*'s reformulation of the common law.

Legislative codification or adoption of the common law providing for the privilege to use force incident to arrest is still the prevailing law in 17 states.[19] As exemplified by Mississippi's statute, the typical formulation of these common law statutes authorizes the use of force in two

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16 RESTATEMENT (2d), TORTS, § 137, Comment c. See also MODEL PENAL CODE § 3.07(2)(b)(iii).

17 *Id.*, Comment b.

18 These seven states are Maryland, Massachusetts, Michigan, Ohio, Vermont, Virginia, West Virginia, and Wyoming. Wyoming law provides that common law defenses (such as justification from privilege) are not abolished. WYO. STAT. ANN. § 6-1-102 (1980).

19 Alabama (CODE § 13A-3-27 (1982); Arkansas (CODE § 5-2-610 (1987); California (PENAL CODE §§ 196 (deadly force), 835 (restraint), 835a and 843 (force) (1988); Georgia (CODE § 16-3-20(4) (1992); Indiana (STAT. ANN. § 35-1-3-3(2)(b)(2) (1985); Iowa (CODE ANN. §§ 804.8, 704.12 (1979); Louisiana (REV. STAT. ANN.. § 14.18(2) (1986); Minnesota (STAT. ANN. T. § 609.066 (1987); Mississippi (CODE ANN. § 97-3-15 (Supp. 1991); Missouri (ANN. STAT. § 562.046 (1979); Montana (CODE ANN. § 46-6-104 (1989); Nevada (REV. STAT. §§ 171.122, 200.140 (1989); Oregon (REV. STAT. §§ 161.235, 161.239 (1991); Rhode Island (GEN. LAWS § 12-7-9 (1981); South Carolina (CODE § 16-3-40(2) (1985); South Dakota (CODEFIED LAWS § 22-16-32 (deadly force), § 22-18-3 (lawful force) (1988); Vermont (STAT. ANN. Tit. 13 § 2305 (1974); Wisconsin (STAT. ANN. § 939.45(4) (1982).

parts: (1) "overcoming actual resistance in the execution of some . . . legal duty." (2) "arresting any felon fleeing from justice."

This authority ends "when to do so (use of force) would be unreasonable under the circumstances . . . Such officer shall not use excessive force or force that is greater than that reasonably necessary in securing and detaining the offender, overcoming the offender's resistance, preventing the offender's escape, recapturing the offender if the offender escapes or in protecting himself or others from bodily harm."[20]

A second type of state statute follows the *Model Penal Code*[21] reformulation of the privilege that allows the use of deadly force only where the offender is threatening deadly force.[22] Over half the 26 states that have adopted the Model Penal Code formulation have amended their former common law provisions in the past decade.[23] One of the most specific of these laws is found in Washington state, which provides that deadly force is justifiable to arrest a person who the officer reasonably believes has committed a felony and has probable cause to believe that the suspect, if not apprehended, poses a "threat of serious physical harm to the officer or a threat of serious physical harm to others."[24]

Many states also have legislation authorizing correctional officers' use of force to maintain control in correctional facilities.[25]

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20 MISS. CODE ANN. § 97-3-15 (Supp. 1991).

21 MODEL PENAL CODE § 3.07 differs in relevant part here from the common law primarily in limiting an officer's use of deadly force, while incident to arrest, to crimes which involve or threaten to involve deadly force or where the arrestee creates a substantial risk of serious harm to others if not apprehended. *Id.* at § 3.07(2)(iv).

22 These states are Alaska (CODE § 11.81.370(3 (1989); Arizona (REV. STAT. § 13-402 (1989); Connecticut (GEN. STAT. § 53a-22(c)(2) (Supp. 1992); Colorado (REV. STAT. § 18-1-707 (2)(b) (1986); Delaware (CODE ANN. Tit. 11 § 467(c) (1987); Florida (STAT. ANN. § 776.05(3)(a) (1991); Hawaii (REV. STAT. TIT. 37 § 703-307 (1986); Idaho (CODE §§ 18-4011, 19-610 (1987); Illinois (ANN. STAT. ch. 38 § 7-5(2) (1989); Kansas (STAT. ANN. § 21-3215 (Supp. 1991); Kentucky (REV. STAT. § 503.090(2) (1988); Maine (REV. STAT. Tit. 17A § 107-2(B) (Supp. 1991); Nebraska (REV. STAT. § 28-14122 (1989); New Hampshire (REV. STAT. ANN. § 627:5 (1986); New Jersey (STAT. ANN. § 2C:3-7 (1982); New Mexico (STAT. ANN. § 30-2-6 (Supp. 1992); New York (PENAL LAW § 35.30 (1987); North Carolina (GEN. STAT. § 15A-401(d)(2)(b) (Supp. 1991); North Dakota (CENT. CODE ANN. § 12.1-05-07(d) (1985); Oklahoma (STAT. ANN. Tit. 21 § 732 (Supp. 1992); Pennsylvania (STAT. ANN. Tit. 18 § 508 (a) (1983); Tennessee (CODE ANN. § 39-11-620 (Phamplet 1990); Texas (PENAL CODE ANN. Art. 9.51 (1974); Utah (CODE ANN. § 76-2-404 (1990); Washington (REV. CODE ANN. § 9A.16.040 (1988).

23 These include Alaska, Colorado, Florida, Idaho, Illinois, Kansas, New Hampshire, New Mexico, North Dakota, Oklahoma, Pennsylvania, Tennessee, and Washington.

24 WASH. REV. STAT. ANN. § 9A.16.040 (1988).

25 E.g., ALA. CODE § 13A-3-27(h) (1982) (authorizing the use of deadly force to prevent escape of an accused or convicted felon). ALK. CODE § 11.81.410 (1989) (use of nondeadly force authorized to maintain order; deadly force authorized to prevent escape of felon); ARIZ. REV. STAT. § 13-403 (2) (1989) (official of jail or prison may use force to maintain discipline). See also COLO. REV. STAT. § 18-1-707(8) (1986) (deadly force authorized to prevent escape of maximum security rule prisoner); TEX. PENAL CODE ANN. § 9.52 (1974)

Governmental Liability

State vicarious liability laws take two forms in the context of governmental liability: (1) modifying the common law doctrine of sovereign immunity under which governmental bodies could not be sued for torts committed by their employees; (2) requiring governmental bodies to defend and indemnify their employees for law suits contending that the employees had injured a private citizen.

Sovereign Immunity

At common law, the state, which creates the courts, cannot be sued in court.[26] Municipalities, which are created by the state, are immune at common law from tort liability.[27] Nonetheless, the municipal immunity doctrine recognizes two main exceptions. First, a distinction is recognized between governmental acts (policies and functions assigned by state law) and proprietary acts, in which the municipal body is acting as a private corporation.[28] Only governmental acts are granted immunity from liability. Second, another type of distinction is recognized between ministerial and discretionary acts of municipal officials. This distinction serves to protect with immunity officials who are required to make discretionary decisions–allowing liability would act as a deterrent to governmental decisionmaking.[29] In contrast, employeees who handle ministerial duties, such as police officers, are not protected with absolute immunity.

(deadly force authorized to prevent escape from custody), § 9.53 (nondeadly force authorized to maintain security in penal institution).

26 M. Borchard, "Governmental Responsibility in Tort," *Yale Law Journal* 34(1924): 1; "Government Responsibility in Tort," *Yale Law Journal* 36 1926); "Government Responsibility in Tort," *Columbia Law Review* (1928): 557. *Cf.* United States v. McLemore, 45 U.S. (4 How.) 286, 287-88 (1846) (the government is not liable to be sued, "except with its own consent, given by law.").

27 See discussion in National Association of Attorneys General, *Sovereign Immunity: The Liability of Government and its Officials* (1976), pp. 2-4.

28 Bailey v. Mayor of New York, 3 Hill 531, 28 Am. Dec. 699 (1842). Factors affecting the proprietary-governmental distinction include whether the actions involve profit, Brown v. Sioux City, 49 N.W.2d 853 (Ia. 1951) (renting property); or are traditional functions, Cloyes v. Delaware Twp., 129 A.2d 1 (N.J. 1957) (municipal sewer system).

29 Charles S. Ryhne, William S. Ryhne, and Stephen P. Elmendorf, *Tort Liability and Immunity of Municipal Officials* (Washington: National Institute of Municipal Law Officers, 1976) pp. 8-14 ; RESTATEMENT (2d), TORTS, § 895D, Comment b.

In most states, the common law doctrine of sovereign immunity has been modified by actions of state courts[30] and legislators. Today, only a handful of states retain the doctrine of sovereign immunity for either state[31] or local government.[32]

In jurisdictions where municipal sovereign immunity has been abolished or waived, liability of the local government is established as if the government were a private employer. In these states, the doctrine of *respondeat superior* applies, under which employers are liable for the foreseeable torts of their employees. The potential for peace officers' use of excessive force is always present and therefore ordinarily foreseeable.[33] The excessive force must have been committed within the peace officer's scope of employment. Many courts use a "scope of authority" test to determine whether an act was within or without the scope of employment.[34] Neither the officer's motivation nor the gain to the government is a determinative factor.[35]

Employee Defense and Indemnification

One important modification of municipal sovereign immunity is state indemnification laws. These laws require governments to indemnify their employees or police officers who are found to have committed a tort in the course of their employment.[36] Indemnification laws are, in

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30 *See, e.g.*, Spanel v. Mounds View School District, 188 N.W.2d 795 (Minn. 1962); Holytz v. City of Milwaukee, 155 N.W.2d 618 (Wis. 1962); Evans v. Bd. of County Commissioners, 482 P.2d 968 (Col. 1971). The movement in state courts to abolish sovereign immunity largely began with Bernardine v. City of New York, 294 N.Y. 361 (1945); Hargrove v. Town of Cocoa Beach, Florida, 96 So.2d 130 (1957); and Muskopf v. Corning Hospital District, 11 Cal. Rptr. 89 (1961). By 1976, over half the state high courts had limited the doctrine of sovereign immunity. National Association of Attorneys General, *Sovereign Immunity: The Liability of Government and Its Officials* (1976), pp. 31-33 . See also Note, "Governmental Immunity in Massachusetts: The Present Need for Change and Prospects for the Future," *Suffolk Law Review* 10(1976): 521, 523.

31 No state claims total sovereign immunity without some form of a tort claims procedure in the courts or an administrative body.

32 *See, e.g.*, ARK. CODE § 21-9-301 (Supp. 1991) (declaring local government to be immune from suit). C. Dallas Sands, Michael Libonati, and John Martinez, *Local Government Law* (Deerfield, Illinois: Callaghan, 1986), pp. 27-6, state that Alabama, Delaware, Maryland, Massachusetts, South Dakota, and Virginia also continue to provide local government immunity from suit.

33 Molton v. City of Cleveland, 839 F.2d 240, 249 (6th Cir. 1988 ("not unexpected given their duties as police officers").

34 Mary M. v. City of Los Angeles, 285 Cal. Rptr. 99 (1991).

35 *Id.* The *Mary M* decision upheld *respondeat superior* liability for the officer's rape of woman stopped by the officer for erratic driving.

36 See, for example, states with laws that mandate indemnification such as Arkansas (CODE § 21-9-203 (1987) (state employees); California (GOV'T CODE § 825. (Supp. 1992); Colorado (REV. STAT. § 24-10-110 (1988); Connecticut (GEN STAT. § 7-465 (1989); Delaware (CODE ANN. Tit. 10 § 4002 (Supp. 1990); and Florida (STAT. ANN. § 768.28(9)(a) (Supp. 1991). See generally Phillip E. Hassman, "Annotation: Validity and Construction of Statutes Authorizing or Requiring Governmental Units to Indemnify Public Officer or Employee for Liability Arising Out of Performance of Public Duties," *American Law Reports* 3d 71(1976):90.

effect, a form of waiver of sovereign immunity.[37] They also often enact procedural requirements before suit in state court can be initiated.[38]

Most indemnification statutes exclude intentional torts. Thus, indemnification is limited to employee torts committed in the performance of duties, within the scope of employment, and not the result of any willful or wanton act of the employee.

Federal Constitutional Law–Section 1983

The most common statute for suing the police under federal law is the Civil Rights Act of 1871, which has been codified as Title 42, United States Code, Section 1983. Although this legislation dates back to the post Civil War era, it has only been extensively used since the 1960s in police federal liability litigation. Section 1983, as it is commonly named, allows persons whose constitutional rights are violated by government officials acting under color of state law to file civil claims in federal court.[39]

In *Monroe v. Pape*,[40] decided in 1961, the United States Supreme Court ruled that federal law provides a civil tort remedy, a Section 1983 action,for deprivations of federally protected rights such as the right to be free from illegal searches and seizures. This case broadened the concept of acting under color of the law to include acts by police officers authorized by state law or agency policy. Litigants must meet two important requirements to press a Section 1983 action against a police officer: (1) the officer was acting under color of state law, and (2) the alleged violation involved a constitutional or federally protected right. Simple negligence is not encompassed by Section 1983.[41] In 1978, the Court further held that a municipality can be liable for acts committed by its employees if an official policy or custom was in part responsible for the acts of the employees.[42] This means that local government can be held liable for the acts of its police officers.

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37 Except where other statutes more broadly waive sovereign immunity. Many indemnification laws are part of the state's tort claims act provisions. *See, e.g.*, MD. COURTS & JUD. PRAC. § 12-309 (Supp. 1992).

38 *E.g.*, CONN. GEN. STAT. § 7-465 (1989), which provides for a six-month period within which the municipal clerk must be given written notice of the intent to file and a description of what occured and when the tort was committed.

39 42 U.S.C. 1983 (1988), enacted as Ch. 22, § 1 of the Civil Rights Act of 1871, 17 Stat. 13.

40 42 U.S.C. § 1983 (1988).

41 Daniels v. Williams, 474 U.S. 327 (1986) (inmate slipped on pillow negligently left by guard in stairway).

42 Monell v. Department of Social Services, 436 U.S. 658 (1978).

Peace officer use of excessive or deadly force in the exercise of their duties clearly meets the "color of law" jurisdictional requirement. Misuse or abuse of the authority provided under state law may be included as acting under color of law.[43]

Two recent decisions of the Supreme Court have identified the constitutional right violated by the use of excessive or deadly force by law enforcement officers as the Fourth Amendment right to be free from unreasonable seizures. In the first of these decisions, *Tennessee v. Garner*, the Court held that the use of deadly force to make an arrest implicates the Fourth Amendment protection against unreasonable seizures. The reasonableness of the use of force is subject to a balancing test weighing the offender's right to life versus society's interest in effective law enforcement. Using this test, the Court found that a police officer's killing of an unarmed suspected burglar violated the Fourth Amendment, notwithstanding a state statute authorizing the use of deadly force to arrest any fleeing felon. The Court said that:

> If the suspect threatens the officer with a weapon or there is probable cause to believe that he has committed a crime involving the infliction or threatened infliction of serious physical harm, deadly force may be used if necessary to prevent escape, and if, where feasible, some warning has been given.[44]

In *Graham v. Connor*,[45] police had, in the course of arresting a diabetic who was experiencing a sugar reaction, broken a bone in his foot, cut his forehead and wrists, and injured his shoulder. Eventually Graham was released and driven home by the police. In deciding *Graham*, the Court reaffirmed use of the Fourth Amendment's objective reasonableness standard for all cases involving excessive force claims. Reasonableness of police use of force, deadly or nondeadly, is to be determined by objective measures of a "reasonable officer at the scene," without regard to the officer's motivations. Thus an officer's good intentions will not make an objectively unreasonable use of force permissable.

In summary, in determining whether the use of force by police is constitutional or excessive, a court will look to such guiding principles as (1) the need for the application of force, (2) the relationship between the need and the amount of force that is used, (3) the extent of the injury inflicted, and (4) whether the force was applied in a good faith effort to maintain or restore order or maliciously just to cause harm. The court will also view all the circumstances of the

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43 United States v. Classic, 313 U.S. 299, 326 (1941) ("Misuse of power, possessed by virtue of state law and made possible only because the wrongdoer is clothed with the authority of state law, is action taken under color of state law."). See generally Steven L. Winter, "The Meaning of 'Under Color of Law'," *Michigan Law Review* 91 (1992): 323.

44 Tennessee v. Garner, 471 U.S. 1, 11-12 (1985).

45 490 U.S. 386 (1989).

situation using an objective test: what would a reasonable officer have done at the scene at the time.

Thus the reasonableness of any force used by a peace officer is largely dependent upon the circumstances of the case. But, where the plaintiff presented no threat to the officer, no use of force is permitted. For example, where an arrestee does not resist arrest, even if he is "argumentative or contentious," any use of force is excessive.[46] Force can only be used to overcome physical resistance or threatened force.

Accidental discharge of a weapon may also implicate the reasonableness standard. In *Brower v. County of Inyo*,[47] the Supreme Court held that a Section 1983 action lies where the plaintiff is injured by the intentional erection of an unconstitutionally dangerous police barricade to stop a speeding car. This "intentional use of force" rationale may apply to cases involving the accidental discharge of a weapon that seriously injures or kills a fleeing unarmed suspect. The issue in these cases is whether it is reasonable for the officer to draw his or her weapon in the first place when the use of deadly force is not authorized by the circumstances.[48]

Peace Officer Failure-to-Act Liability

Under Section 1983, nonfeasence, as well as misfeasence, may be a basis of personal liability. Thus, a peace officer who sees another officer using excessive force or brutality has a duty to stop the use of excessive force.[49] This duty exists even where the third party officer is a subordinate of the officer using excessive force.[50] Failure to respond to this duty may also subject the third-party peace officer to charges of civil conspiracy to deprive the plaintiff of his

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46 Bauer v. Norris, 713 F.2d 408 (8th Cir. 1983). *Bauer* and like cases do not discuss minimal force uses such as handcuffing otherwise compliant suspects or arestees. This type of force use is justified on the basis of protecting the officers from a deceptively compliant suspect, rather than as being needed to force compliance with a legitimate command. Nor do these cases discuss the use of force against a suspect engaged in passive resistance to the officer's command.

47 109 S. Ct. 1378 (1989).

48 *See, e.g.*, Pleasant v. Zamieski, 895 F.2d 272 (6th Cir. 1990).

49 McHenry v. Chadwick, 896 F.2d 184 (6th Cir. 1990); Fundiller v. City of Cooper City, 777 F.2d 1436 (11th Cir. 1985); Ware v. Reed, 709 F.2d 345 (5th Cir. 1983) (custody interrogation); Hampton v. Hanrahan, 600 F.2d 600, 626 (7th Cir. 1979); Curtis v. Everette, 489 F.2d 516 (3d Cir. 1973); Byrd v. Briskhke, 466 F.2d 6 (7th Cir. 1972). *But see* Gaudreault v. Municipality of Salem, 923 F.2d 203 (1st Cir. 1990) (officer had no opportunity to prevent sudden and brief attack). In United States v. McKenzie, 768 F.2d 602 (5th Cir. 1985), the court affirmed a criminal conviction under 18 U.S.C. § 241 and 242 (1988) of a police officer who was aware of a brutal interrogation of plaintiff by other officers, but did nothing to stop it. See generally Elliot Spector, "Nonactor Liability: The Duty Not to Look the Other Way," *Police Chief* 59(April 1992): 8.

50 Putnam v. Gerloff, 639 F.2d 415 (8th Cir. 1981).

or her civil rights.[51] A peace officer who covers up by falsifying police reports of the use of excessive force may also be liable for either conspiracy or personal acts that deprive a plaintiff of the right of access to the courts.[52]

Corrections Settings

The *Graham* decision also noted that excessive force claims in the correctional context implicate the Eighth Amendment's protection against cruel and unusual punishments.[53] Thus, in *Whitley v. Albers*,[54] the Court had earlier held that the Eighth Amendment was not violated when an inmate was shot by a correctional officer during a prison riot. The test used by the Court was whether there had been a deliberate and wanton infliction of unnecessary pain. Determining whether the force used was unnecessary or wanton requires assessment of whether the force used was part of a good faith effort (in that case) to maintain or restore discipline. The Court specifically rejected the application of substantive due process claims as a basis for Section 1983 liability, since the Eighth Amendment is specifically applicable to prisoner protection cases. *Whitley* was soon followed by *Wilson v. Seiter*,[55] in which the Court held that in conditions of confinement litigation, prison officials are held to the deliberate indifference standard previously used to hold actionable deliberate refusal to treat an inmate's medical needs.[56] That is, the conditions of confinement violate the Eighth Amendment only where officials are shown to have a culpable state of mind. They must have (or should have) known about the conditions complained about.

More recently the Court's decision in *Hudson v. McMillian*, reaffirmed the application of the Eighth Amendment's deliberateness test in excessive force cases.[57] The mere use of excessive force is sufficient to create an Eighth Amendment violation except where the resulting injury is *de minimis*. But a serious injury need not have occurred. In *Hudson*, the inmate who

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51 *Cf.* Hampton v. Hanrahan, 600 F.2d 600 (7th Cir. 1979).

52 Karim-Panahi v. Los Angeles Police Department, 839 F.2d 621 (9th Cir. 1988) (summary judgment reversed for alleged violations of Section 1985 civil rights protection and Section 1986 conspiracy to prevent violation of civil rights); Bell v. City of Milwaukee, 746 F.2d 1205, 1260-65 (7th Cir. 1984) (Sections 1985, 1986 conspiracy violations found); Stone v. City of Chicago, 738 F.2d 896 (7th Cir. 1984) (conspiracy to obstruct justice); Ryland v. Shapiro, 708 F.2d 967 (5th Cir. 1983) (conspiracy to deprive plaintiff of access to courts for wrongful death action). But see, Dooley v. Reiss, 736 F.2d 1392 (9th Cir. 1984) (false response to interrogatories not actionable where answers did not affect outcome of earlier 1983 litigation).

53 Graham v. Connor, 490 U.S. 386, 394 (1986).

54 475 U.S. 312 (1986).

55 111 S. Ct. 2321 (1991). See also Graham v. Connor, at 395, n. 10.

56 Estelle v. Gamble, 429 U.S. 97 (1976).

57 112 S. Ct. 995 (1992).

had been beaten did not receive any permanent injury nor did he require significant medical treatment.[58]

Police officers may also be liable for failure to treat the medical needs of arrested persons.

Defense of Qualified Immunity

An important defense to charges of violation of Section 1983 rights, analogous to the defense of privilege at common law, is that of a qualified immunity from suit. Qualified immunity in this instance is not merely a defense to liability but a bar to the suit in the first place. Government officials may be immune from a Section 1983 claim if they (1) act within the scope of their discretionary authority and (2) do not violate clearly established constitutional or statutory rights that a reasonable person would know. The doctrine of qualified immunity has been applied by the Supreme Court to both police officers[59] and correctional officials.[60]

A police officer is within the scope of the officer's duties when he or she uses reasonable force to make a lawful arrest. The use of force *in excess* of that required places the officer outside the scope of employment and outside the protection of qualified immunity. In federal suits, federal constitutional law principles define what excessive force is, notwithstanding any authorization of the use of force in state law.[61]

The test of whether a clearly established constitutional or statutory right has been violated is an objective one. The test is whether the applicable law was sufficiently clear that a reasonable officer should have known of the rule.[62] It is not enough that an officer have a good faith belief in an applicable legal rule, unless there is some reasonable basis for this belief.[63] An

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58 The inmate Hudson, while shackled, was attacked by two guards who punched him in the face and chest. As a result of the beating, Hudson suffered minor bruises and swelling of the face, mouth, and lip. In addition, his partial dental plate was cracked and several teeth were loosened.

59 Pierson v. Ray, 386 U.S. 547 (1967).

60 Procunier v. Navarette, 434 U.S. 555 (1978).

61 For example, the constitutional limits on the use of deadly force set forth in Tennessee v. Garner, 471 U.S. 1 (1985), control the determination of the reasonableness of any deadly force used, notwithstanding state statutory authority to the contrary.

62 Harlow v. Fitzgerald, 457 U.S. 800 (1982).

63 Anderson v. Creighton, 483 U.S. 635 (1987) (qualified immunity for warrantless search). *See also*, Lopez v. Robinson, 914 F.2d 486, 489 (4th Cir. 1990); Calamia v. City of New York, 879 F.2d 1025, 1036 (2d Cir. 1989). Cases excusing a Fourth Amendment violation generally involve reasonable cause issues, a factor not typically present in use of force cases.

officer's knowledge that specific conduct violates the law destroys any qualified immunity that an otherwise "reasonably well trained officer" would have without this specific knowledge.[64]

Supervisory and Governmental Liability

In *Rizzo v. Goode*, the U.S. Supreme Court held that Section 1983 liability requires an "affirmative link between . . . police misconduct and . . . [supervisor] authorization or approval of such misconduct."[65] Governmental officials are not liable, therefore, for their subordinates' acts unless the supervisor's acts (or inactions) are part of the causal chain resulting in the misconduct. This requires "either the supervisor's personal participation, his exercise of control or direction, or his failure to supervise."[66]

Supervisors may be liable for failure to correct a problem[67] or failure to provide adequate training.[68] They may also be liable for failure to implement policies that would have prevented subordinate misconduct.[69]

A clear case of supervisory personal liability occurs when the supervisor is present at the scene where excessive force is used. The supervisor has an even greater duty to intervene to limit and halt the use of excessive force than do line officers.[70]

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64 *See* Malley v. Briggs, 475 U.S. 335, 341 (1986) (qualified immunity "provides ample protection to all but plainly incompetent or those who *knowingly violate* the law.") (emphasis added). *See also* Watertown Equipment Co. v. Norwest Bank Watertown, 830 F.2d 1487 (8th Cir. 1988), *cert. denied*, 486 U.S. 1001 (1988); Perry v. Larsen, 794 F.2d 279 (7th Cir. 1986).

65 423 U.S. 362 (1976).

66 Meade v. Grubbs, 841 F.2d 1512, 1527 (10th Cir. 1988).

67 Dobos v. Driscoll, 537 N.E.2d 558 (Mass. 1989), *cert. denied*, 110 S. Ct. 149 (1990) (officer had been repeatedly removed from public contact positions prior to incident involving motorist). See also Gutierrez-Rodrigues v. Cartagena, 882 F.2d 553 (1st Cir. 1989); McCann v. Coughlin, 698 F.2d 112 (2d Czir. 1983). In Brandon v. Holt, 469 U.S. 464 (1985), the court held that a police chief was not liable for officers misconduct because he had been chief for only six months and was in the process of instituting reforms to eliminate police brutality. But see Edwards v. Bayer, 863 F.2d 606 (8th Cir. 1988), which held that failure to issue a policy, that if followed would have prevented constitutional wrong, can be a basis for liability. The court's decision did not discuss failure of training as a possible basis for liability.

68 In Oliver v. Collins, 904 F.2d 278, 281 (5th Cir. 1990), the plaintiff's allegations of a link between negligence in providing training and the assault upon the plaintiff were not specificly supported.

69 Wilks v. Young, 897 F.2d 896, 898 (7th Cir. 1990) (failure to institute policies to prevent inmate attacks); Gutierrez-Rodriguez v. Cartagena, 882 F.2d 553 (1st Cir. 1989) (police chief liable for failure to implement adequate disciplinary procedures).

70 Maclin v. Paulson, 627 F.2d 83 (7th Cir. 1980); Dellums v. Powell, 566 F.2d 216 D.C. Cir. 1977); McQurter v. Atlanta, 572 F. Supp. 1401 (N.D. Ga. 1983), *appl. dismd.*, 724 F.2d 881 (11th Cir. 1984). See also Burton v. Waller, 502 F.2d 1261 (5th Cir. 1974).

Simple negligence in supervision does not result in Section 1983 liability.[71] Supervisory liability for failure to supervise must be based upon (1) a duty to supervise[72] *and* (2) the failure to supervise being a causal factor in that it constituted either gross negligence[73] or deliberate indifference.[74] The supervisor must have actual or constructive knowledge of the potential for subordinate abuse (e.g., from prior reported incident).[75] The report of a single prior incident is not sufficient by itself to generally put a supervisor on notice.[76] However, a supervisor's later ratification or prior acquiescence in the use of excessive force may create personal liability based upon a single act.[77]

Municipal liability parallels supervisory liability. The Supreme Court decision in *Monell v. New York City Department of Social Services*[78] determined that local governments can be liable for damages in a Section 1983 action. Under *Monell* local government liability rests upon a local policy or custom being implicated as a causal factor in the injury. Lower court application of *Monell* has typically involved allegations of a governmental policy or custom without any formal written statement of policy.[79] Indeed, there are relatively few cases where the governmental defense was predicated upon a written policy forbidding the actions taken.[80]

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71 Leach v. Shelby County Sheriff, 891 F.2d 1241 (6th Cir. 1989), *cert. denied*, 110 S. Ct. 2173 (1990).

72 Reid v. Kayye, 885 F.2d 129, 131-2 (4th Cir. 1989); Meade v. Grubbs, 841 F.2d 1512, 1528 (10th Cir. 1987).

73 Guzman v. City of Cranston, 812 F.2d 24, 26 (1st Cir. 1987); Rascon v. Hardiman, 803 F.2d 269, 274 (7th Cir. 1986).

74 Gaston v. Taylor, 918 F.2d 25, 30 (4th Cir. 1990) (indifference to validity of inmate's defense to charge of institutional rule breaking); Pool v. Missouri Dept. of Corrections & Human Resources, 883 F.2d 640, 645 (5th Cir. 1989) (failure to protect inmate against known danger of inmate attacks); Gutierrez-Rodriguez v. Cartagena, 882 F.2d 553, 646 (1st Cir. 1989) (immediate supervisor liable for allowing officer with history of violent behavior to remain in field); Goodson v. Atlanta, 763 F.2d 1381 (11th Cir. 1985), *reh. den., en banc*, 770 F.2d 175 (correctional director liable for excessive force used by guards where he had notice of prior abuse and failed to act); Smith v. Rowe, 761 F.2d 360 (7th Cir. 1985) (director of corrections liable for failure to take action when aware that plaintiff-prisoner was unconstitutionally placed in long-term segregation).

75 Busby v. City of Orlando, 931 F.2d 764 (11th Cir. 1991); Meriweather v. Coughlin, 879 F.2d 1037 (2d Cir. 1989).

76 *Id.* See also Brown v. Crawford, 906 F.2d 667, 671 (11th Cir. 1990), *cert. denied*, 111 S. Ct. 2056 (1991).

77 *Cf.* McKinnon v. City of Berwyn, 750 F.2d 1383 (7th Cir. 1984); Commonwealth of Pennsylvania v. Porter, 659 F.2d 306 (3d Cir. 1981). See also Alvarez v. Wilson, 431 F. Supp. 136 (N.D. Ill. 1977).

78 436 U.S. 658 (1978). The 11th Amendment to the Constitution specifically denies federal court jurisdiction to hear liability actions against the states.

79 But see Buffkins v. City of Omaha, 922 F.2d 465 (8th Cir. 1990) (unconstitutional ordinance); Matthias v. Bingley, 906 F.2d 1047 (5th Cir. 1990) (unconstitutional ordinance); Zook v. Brown, 865 F.2d 887 (7th Cir. 1989) (operating procedures manual).

80 *See, e.g.*, Brown v. City of Clewiston, 848 F.2d 1534 (11th Cir. 1988); Depew v. City of St. Marys, 787 F.2d 1496 (11th Cir. 1986) (custom of ignoring regulations); Kibbe v. City of Springfield, 777 F.2d 801 (1st Cir. 1985), *cert. dism.* 480 U.S. 257 (1987). But see Edwards v. Bayer, 863 F.2d 606 (8th Cir. 1988).

Most *Monell* cases in which the plaintiff prevails involve repeated violations from which an inference of policy or custom is made.[81] In other cases, a city program was structured so that constitutional violations were a natural consequence: e.g., underfunding or staffing of a correctional facility.[82] In either instance, governmental claims of lack of knowledge rarely serve as effective defenses.[83]

Another type of *Monell* violation is that resulting from "deliberate indifference" to the need for a policy. By and large this standard applies most often in the context of the adequacy or inadequacy of a training program for peace officers.[84] The Supreme Court decision in *Canton v. Harris* established the deliberate indifference rule by noting that sometimes

> the need for more or different training is so obvious and the inadequacy so likely to result in violation of constitutional rights that the policymakers can be said to have been deliberately indifferent to the need.[85]

The key to *Canton* is the obviousness of the need for training. The example the Court provided in *Canton* of obviousness is the need for training in the use of deadly force to arrest fleeing felons to meet the Court's standard in *Tennessee v. Garner*.

A final avenue of municipal liability of potential applicability to the LTL context is suit over police policies for equipment use. As a rule, police officers are required to carry weapons with them on and off duty. Extension of this policy to unfit officers may create municipal

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81 It may be argued that proof of a pattern of constitutional abuse is evidence of a custom under *Monell*. *See, e.g.*, Watson v. City of Kansas City, Kan., 857 F.2d 690, 696 (10th Cir. 1988); Garza v. City of Omaha, 814 F.2d 553, 556 (8th Cir. 1987). Alternatively, it may be said that proof of widespread practices of abuse implies knowledge and ratification of these practices by policymakers. *See, e.g.*, Gray v. Dane County, 854 F.2d 179, 183 n.6 (7th Cir. 1988); Vilante v. Dept. of Corrections of New York, 786 F.2d 516, 519-22 (2d Cir. 1986). The Supreme Court held in City of Oklahoma City v. Tuttle, 471 U.S. 808 (1985), that proof of a single incident of unconstitional behavior, without more, does not prove custom or policy under *Monell*. But see Parker v. Williams, 862 F.2d 147 (11th Cir. 1989), in which the court held that a single incident of rape by a jailer was "caused" by the sheriff's failure to investigate the jailer's background before hiring and promoting him.

82 *Cf.* Cabrales v. County of Los Angeles, 864 F.2d 1454 (9th Cir. 1988), *vacated*, 109 S. Ct. 2425, *aff'd*, 886 F.2d 235 (1989) (understaffing); Anderson v. City of Atlanta, 778 F.2d 678 (11th Cir. 1985) (understaffing); O'Quinn v. Manuel, 773 F.2d 605 (5th Cir. 1985) (underfunding); Ancata v. Prison Health Services, Inc., 769 F.2d 700 (11th Cir. 1985) (underfunding).

83 *Cf.* Bennett v. City of Slidell, 728 F.2d 762, 768 (5th Cir. 1984) (en banc), *cert. denied*, 472 U.S. 1016 (1985). See also Gilmere v. City of Atlanta, 774 F.2d 1495, 1503 (11th Cir. 1985) (citing cases involving constructive knowledge).

84 Liability arises directly where the training that is provided instructs peace officers to engage in unconstitutional behavior. See Watson v. City of Kansas City, Kansas, 857 F.2d 690 (10th Cir. 1988); Spell v. McDonald, 824 F.2d 1380 (4th Cir. 1987).

85 489 U.S. 378, 390 (1989).

liability.[86] However, a weapons carrying policy, by itself, does not *per se* signify municipal liability.[87]

Municipalities cannot claim qualified immunity.[88] Thus, governmental liability can exist even if the peace officer whose action caused the injury is immune from suit due to qualified immunity.[89]

Summary of Civil Liability Principles

The points below summarize the analysis of the civil laws and principles related to the use of force by peace officers. Some of the key liability principles applicable to use of force situations include the following:

- Peace officers are legally permitted to use only that degree of force that is judged to be objectively reasonable at the time and in all the circumstances of the situation. The courts will examine the safety-related aspects of the situation (amount of danger), the amount of force used, extent of the injuries, and the intent of the officer.

- Correctional officers' uses of force are measured by either a reasonableness standard or by whether their use of force reflected a deliberate and wanton infliction of pain.

- Peace officers are also responsible for responding to the medical needs of subjects against whom force was used.

- Supervisors and other officers have a duty to intervene when another officer is using excessive force against a subject.

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86 Gibson v. City of Chicago, 910 F.2d 1510 (7th Cir. 1990).

87 LaRocco v. City of New York, 468 F. Supp. 218 (E.D.N.Y. 1979).

88 Owen v. City of Independence, 445 U.S. 622 (1980).

89 In Fann v. Cleveland, 616 F. Supp. 305 (N.D. Ohio 1985), the officers who conducted a strip search per established policy and custom were given qualified immunity due to lack of clearly established rule governing strip searches. However, the city was held liable for violation of constitutional right. See also Parker v. Williams, 862 F.2d 1471 (11th Cir. 1989) (county liable for actions of sheriff, who has absolute immunity under 11th Amendment due to state law status as state officer). See Ralph Goldberg, "Monnell Liability When Individual Defendants Are Found Not Liable." In *Civil Rights Litigation and Attorney Fees Annual Handbook,* Barbara M. Wolvoritz, ed. (New York: Clark Boardman, 1988), pp. 87, 89-91.

- Governmental liability requires that there be a causal relationship between an officer's excessive force actions and some governmental failure such as inadequate training.

- Governmental liability judged by federal law requires a higher level of governmental failure than does state law-based liability.

- Governmental bodies in most states are responsible for indemnifying peace officers against whom court damages have been levied, except in the most egregious cases of excessive force.

Legal Principles Applicable to LTL Weapons

Overview

While the above legal principles apply to use of force situations, they also apply to the use of LTL weapons. By definition, employing an LTL weapon means an officer is using force. LTL weapon use encompasses a variety of settings including law enforcement on-street encounters or disturbance calls, chasing fleeing subjects, riots, correctional facilities, barricade situations, and other situations. An examination of excessive force litigation applying the principles reviewed above shows that these cases commonly involve about eight different types of fact situations. This typology readily applies to the use of LTL weapons:

- Use (or threat) of LTL weapon where subject offers no resistance.

- Negligent use of LTL weapon (normally non-lethal) resulting in death or serious injury.[90]

- Excessive use of LTL weapon as overreaction to subject resistance to peace officer (continued past point of no-resistance).[91]

- Intentional infliction of pain using an LTL weapon as summary punishment.[92]

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90 A typical case involving allegations of negligent use of force resulting in death are cases where a peace officer used a caratoid or "chokehold" to subdue a resisting subject. *See, e.g.*, McQurter v. Atlanta, 572 F. Supp. 1401 (N.D. Ga. 1983), *appl. dism.*, 724 F.2d 881 (11th Cir. 1984). But see Raley v. Fraser, 747 F.2d 287 (5th Cir. 1984) (multiple uses of chokehold during arrest not actionable).

91 *See, e.g.*, Haynes v. Marshall, 887 F.2d 700 (6th Cir. 1989) (beating after resisting inmate shackeled). But see Ball v. Tong, 677 F. Supp. 1177 (N.D. Ga. 1988) (Section 1983 not violated where officer use of nightstick to overcome resisting subject was at most "possible overeaction").

- Failure to provide medical treatment for injuries from peace officer's use of LTL weapon.[93]

- Supervisor or other officer fails to intervene where another officer is misusing an LTL weapon against a subject.

- Supervisor fails to respond to knowledge about potential misuse of LTL weapons, such as disciplining officers with records of prior LTL weapons misuse.

- Agency fails to set policy or provide appropriate training to peace officers or their supervisors in the correct use of LTL weapons.

This basic LTL weapon liability typology reflects possible approaches that may be used by the courts to legally define the types of situations where civil damages could be assessed for misuses of an LTL weapon. All of these situations involve potential liability under state tort law and federal Section 1983 for peace officers, supervisors, and local government.

Future potential liability issues involving LTL weapons may also include an analysis by the courts that LTL weapons should have been available for use in certain situations where serious injury was caused by a traditional weapon (handgun). Thus agencies may be required to deploy certain types of LTL weapons to address foreseeable situations where the LTL weapons might save lives.

The rest of this section of the chaper will be used to discuss and analyze the most common liability issues that may impact the use of LTL weapons.

LTL Weapon Potential Liability Issues

Officer Overreaction and Excessive Use of LTL Weapon

Excessive force as an overreaction by officers can be defined as force used in response to subject resistance that exceeds that necessary to overcome resistance. In one illustrative case, excessive overreactive force was used to subdue a subject who, while handcuffed, resisted officer

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92 *See, e.g.*, Bordanaro v. McLeod, 871 F.2d 1151 (1st Cir. 1989) (police officers attacked bar patrons who had beaten up off-duty officer). This scenario differs from both "any force" or "excessive force" in that it includes the subjective intent to use any or excessive force.

93 Estelle v. Gamble, 429 U.S. 97 (1976); Benavides v. County of Wilson, 955 F.2d 968 (5th Cir. 1991), appl. pend. (deputies' violation of 8th Amendment rights to medical treatment not sufficient to show failure of training). See also Demetrius v. March, 560 F. Supp. 1157 (E.D. Pa. 1983) (4th Amendment claim was valid cause of action under § 1983 for arrestee denied medical treatment).

efforts to remove him from a patrol car. The subject's resistance continued in the stationhouse where he continued using profanities and refusing to cooperate during booking. The officers then smashed his face into a glass window, after which they tripped the subject and beat him while on the floor.[94] The crux of this type of excessive force is that it occurs in the heat of the moment, a response to the subject's actions.

Some situations pose greater degrees of subject resistance than others, with differing implications for officer safety. Officer-subject interactions begin with the officer's effort to command the attention and responsiveness of the subject. At one extreme, the subject may offer no resistance to the officer. As noted, any use of force, including using an LTL weapon, is unreasonable where the subject offers no resistance. At the other extreme, if the subject responds with deadly force, an officer's use of an LTL weapon is unlikely and may be ill advised. In between, the officer's judgment about the need for force must be based on the circumstances of the situation and the type of LTL weapon available.[95] As LTL weapons become more effective and safer (cause no lasting injuries), the possibility exists that officers will resort too quickly to "spraying" unruly subjects. While the harm may be slight, the public policy and liability issues are significant. In Section 1983 suits, the juries may award damages for slight harm (including pain and suffering) and emotional harm (including fear, humiliation, and mental anguish), even if no actual damages are proven.[96]

> **Scenario:** The subject and an officer meet in an on-the-street encounter. The subject vocalizes resistance to the officer's command to do something (or stop doing something). The subject then offers limited physical resistance by slightly touching the officer. The confrontation escalates and the subject becomes more verbally abusive and resistant. The subject threatens harm to the officer.

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94 See Molton v. City of Cleveland, 839 F.2d 240 (6th Cir. 1988).

95 See William A. Geller and Michael Scott, *Deadly Force: What We Know (*Washington: Police Executive Research Forum, 1992*)*, note 62, at 309-318; Lawrence C. Trostle, "The Force Continuum: From Lethal to Less-than-Lethal Force," *Journal of Contemporary Criminal Justice* 6(Feb. 1990): 23. The Jamieson report, *supra* note 3 at Section 4.2, notes that training based upon a continuum model ("incremental model") of the use of force can result in officer underutilization of force and subsequent injury to the officer. As a practical matter, the choice of models determines where the burden of proof lies in assessing the relevance of force choices available to the officer. That is, the situational model requires only that the officer show that the force selected was a reasonable choice. The availability of alternatives is irrelevant. The plaintiff must show that the availability of these alternatives makes the force actually used to have been unreasonable. In contrast, the continuum model requires the officer to show that the choice of lesser force would have been either unreasonably dangerous or probably ineffective.

96 *See* Bauer v. Norris, 713 F.2d 408 (1983).

At what point is this officer justified in using an LTL weapon against this subject? Among factors affecting this decision can be the officer's reasonable belief that

- Continued verbal persuasion efforts would have been futile and might have led to injury to the officer.
- He or she might have been at personal risk in attempting to arrest and handcuff the subject.
- Subject may have access to a hidden weapon.
- If the situation continued to escalate, other types of force could have resulted in greater injury to subject.

The starting point for this analysis is whether the reasons for the officer-initiated confrontation with the subject were legally justifiable. For example, if the officer's command was based on probable cause to stop the subject (e.g., reasonable suspicion to stop and frisk), then the officer is authorized to use force that is reasonable to effect his lawful purpose.

The reasonableness of the officer's beliefs about the appropriateness of LTL weapon use will vary depending upon the subject's characteristics, the officer's physical capabilities relative to the subject, officer's prior training and experiences in analogous situations, the officer's prior knowledge of the subject, and the type of LTL weapon available for use. For example, a physically mismatched officer may have a reasonable need to rely on a LTL weapon, rather than personal strength. The officer's personal knowledge that the subject has fought with officers before may provide a reasonable basis for believing that the above scenario could escalate to a dangerous situation. The record of the officer's experiences in such confrontations with subjects should support the contention that the officer has previosly shown the ability to distinguish between confrontations requiring LTL weapon use and nonuse.

The reasonableness of the officer's use of an LTL weapon is also judged by whether the subject is preceived as likely to continue to resist the officer's lawful commands. If the officer feels reasonably justified in restraining the subject because of his failure to comply, then appropriate use of an LTL weapon may be justified. However, by merely beginning to deploy use of the LTL weapon, the subject's resistance may abate. At this point, continued deployment and use of the LTL weapon is unlawful. The subject has resisted, but now complies. The likelihood of continued resistance must be weighed against the likelihood of injury to the subject from the LTL weapon. Thus, while the use of a safe chemical spray may be reasonable in the above scenario, if resistance continues, use of a baton may not be reasonable because of the

possibility of more serious injury. As this last example shows, the availability of a range of LTL weapon types gives officers more options to employ reasonable force.

The above scenario has an analogy in the corrections area. Correctional officers frequently have to move prisoners who may refuse to cooperate and leave their cell. Unlike the prior scenario, the use of an LTL weapon to move an inmate is likely to be subject to supervisory direction or agency policy directives that reflect a considered weighing of the potential costs and benefits associated with LTL weapon use. Many correctional agencies are able to document the type of injuries to staff or inmates that can occur when conventional force is used to enforce cell transfers. Because the LTL weapon use results from policy decisions, the allegation of overreaction is unlikely to prevail, except where there is multiple applications of the LTL weapon.

Finally, in the above scenario, if the subject had struck the officer and presented a continuing danger, the officer would clearly be justified in using an LTL weapon. Even if the subject did not present a continuing danger, the officer might be justified in using certain LTL weapons (e.g., safe chemical sprays) to subdue and arrest the subject for this crime.

Negligent Use of LTL Weapons

The crux of negligent use of an LTL weapon is carelessness, not malice. The standard of care by which negligence is measured is that action which a trained officer is expected to follow.

> **Scenario:** An officer shoots a taser-like dart at a subjects head. The manufacturer's use directions and warnings state that the darts are not to be used in any area above the neck, especially near the eyes.

Any knowing use of an LTL weapon contrary to the instructions specified for usage is evidence of negligence. For example, chemical spray agents should not be used in unventilated areas. The use of a chemical spray agent in areas where ventilation is poor can result in damage to the respiratory tract.[97] Another example of negligent use is the firing of a chemical spray directly into the face and eyes.[98] Loss of vision may also result from exposure to high dosages of a chemical spray in an enclosed space.[99]

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97 *See* Titcomb v. State, 222 N.Y.S.2d 596 (Ct. Cl. 1961).

98 *See* Wall v. Zeeb, 153 N.W.2d 779 (N. Dak. 1967).

99 *See* District of Columbia v. Colston, 468 A.2d 954 (1983).

Use of LTL Weapon Against Nonresistant Subject

The use of an LTL weapon against a nonresistant subject is an unreasonable use of force. This type of force is not a legitimate use of force, such as for overcoming resistance to an arrest.

> **Scenario:** A nonresistant subject is threatened by an officer with an LTL weapon use against the subject. The LTL weapon is not used, but the subject reasonably fears its use. No physical injury results. However, emotional injury is claimed.

What is the legal liability for this threat? The threat to use an LTL weapon differs from the threat to use a firearm. As a practical matter, the level of fear from a firearm use threat is likely to be far greater than the threat to use a nondeadly weapon.[100] An officer's threat to use a firearm may often be justified by the need to ensure that the situation is "wholly stable and controlled."[101] An officer's threat to use an LTL weapon, such as a chemical spray, against a nonresistant subject is more likely to be gratuitous, since it cannot be as easily justified on the basis of a need to control the situation.

Officer Indifference to Medical Needs

Officer indifference to medical needs differs from intentional infliction of pain in that actual intent to cause harm is not required. A culpable state of mind may be inferred from the failure to provide medical aid in circumstances where a reasonable person would have recognized the need for aid.[102]

> **Scenario:**An officer uses an LTL weapon, such as a chemical spray or stun gun, to subdue a subject. The subject is then transported to jail. No medical assistance or review is provided for subject.

What are the potential liabilities in this situation? Where chemical spray agents are used, the irritant agent may persist for some time. Injury may result unless the irritant is washed out. Where a taser-type LTL weapon is used, the subject must have the taser darts removed and be

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100 A few decisions limit the applicability of Section 1983 remedy where the resultant injury was only "temporary emotional distress." Huimojosa v. City of Terrell, 834 F.2d 1223, 29 (5th Cir. 1988), *cert. denied*, 493 U.S. 822 (1989). See also Gumz v. Morrissette, 772 F.2d 1395 (7th Cir. 1985), *overruled*, Lester v. City of Chicago, 830 F.2d 706, 713-4 (7th Cir. 1987) (affirming relevant point in dictum, *Id.* at 714. But see Bauer v. Norris, 713 F.2d 408 (1983).

101 Himojosa v. City of Terrell, 834 F.2d 1223, 31 n. 13 (5th Cir. 1988).

102 See *supra* note 93 and accompanying text.

checked for damage caused by the electrical shock from the taser.[103] Once the subject has been brought under control, the officer should check to see if first aid assistance is required.[104] Court testimony indicates that at least two deaths have occurred in California from the use of a taser.[105] New York state has outlawed use of tasers due to its possible effect upon persons with heart conditions.[106]

Officer failure to ensure that the subject receives prompt medical treatment is rarely excusable. Direct transportation to jail of a tasered arrestee without a medical examination can be considered to be either unreasonable or deliberate indifference to medical needs (depending upon which standard applies).

Supervisor Liability

Supervisor liability for an officer's use of excessive force with an LTL weapon is primarily one of failure to supervise. Failure of supervision may be either on-scene or incident-prevention failures. On-scene supervisory failures typically involve inexcusable non-action in the presence of excessive force use by a subordinate. Prevention failures typically involve supervisory awareness of the potential for future incidents of excessive force (e.g., prior officer behavior) and the absence of measures to deter excessive force incidents.

Policymaking supervisors may also be liable for failure to establish a policy regulating uses of LTL weapons. The chief executive officer of a police agency is generally responsible for setting policies about the availability and use of LTL weapons. Failures in policy setting that are causally linked to an excessive force incident can result in supervisor liability.

> **Scenario:** A supervisor arrives at the scene where a subject is present with two officers. One officer has an LTL weapon deployed. The subject is nonresistant and secured by handcuffs. The officer uses the LTL weapon on the subject. The other officer possesses an unauthorized LTL "blackjack."

The reasonableness of the supervisors non-action is dependant upon the clarity of the situation. The supervisor may require some time to understand what is happening and that LTL weapon use is not warranted. Where the potential danger from the subject is ambiguous, the

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[103] In McKenzie v. City of Milpitas, 738 F.2d 1293, 1296 n. 1 (N.D. Cal. 1990), the City is reported to have a policy requiring medical treatment of any subject against whom a police officer has used a taser.

[104] "Models for Management: IACP Model Non-Lethal Restraint Weapons Policy IV (C)," *Police Chief* 55(Aug. 1988): 79.

[105] McKenzie v. City of Milpitas, at 1296-7.

[106] People v. Sullivan, 500 N.Y.S.2d 644, 647 (Ga. Appl. 1986). See also McCranie v. State, 322 S.E.2d 360, 361 n. 1 (1984) (Taser is classified as deadly weapon by state prison system).

supervisor is warranted in leaving discretion to use the LTL weapon to the subordinate officer. However, if the supervisor has sufficient time to understand the situation and the subject presents no danger, the supervisor must intervene.[107]

A supervisor's negligence in controlling subordinates' use of LTL weapons can result in personal liability where that negligence is part of the causal chain resulting in excessive force LTL weapon application. Supervisor liability rests upon the foreseeability of the possibility of excessive force with use of the unauthorized LTL weapon and the resultant duty to act. One basis for foreseeability derives from the absence of officer training in the use of the unauthorized LTL weapon. As a general rule, possession equals use, which further equates with the potential for misuse due to lack of training.[108] The supervisor's awareness of the possession of an unissued LTL weapon also calls into play the supervisor's negligence for failure to discipline.

Governmental Liability

Governmental liability for an officer's use of excessive force with an LTL weapon is primarily based on a theory of failure to either (1) train the officer or (2) establish a policy that limits dangerous or unnecessary use of the LTL. One of the few cases explicitly discussing LTL weapon training is *McKenzie v. City of Milpitas*, in which taser policies and training are critically examined.[109]

> **Scenario:** An agency provides no formal classroom training in LTL weapon use. Instead, it adopts a "field training" plan to use field training officers and written tests. Supervisors are also not formally trained.

Officer training in the use of LTL weapons is required because of the foreseeability of LTL weapon misuse resulting in excessive force. To meet a reasonableness test, agency LTL weapon training must be implemented and the training should include instruction on the legal limits to the use of LTL weapons force. Training is not adequate where it fails to train in legal limits on the use of force.[110]

Court decisions about the adequacy of training tend to draw sharp distinctions between virtually *no* training and *some* training.[111] As long as the agency makes a good faith effort to

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[107] *Cf.* McQurter v. City of Atlanta, 572 F. Supp. 1405, 1416-18 (N.D. Ga. 1983), *appl. dism.*, 724 F.2d 881 (11th Cir. 1984) (chokehold).

[108] See generally Hardeman v. Clark, 593 F. Supp. 1285 (D.C.D.C. 1984).

[109] McKenzie v. City of Milpitas, 738 F. Supp. 1293 (N.D.Cal. 1990).

[110] *See* Davis v. Macon County, 927 F.2d 1473, 1483 (9th Cir. 1991), *cert. denied*, 112 S. Ct. 275 (1991).

[111] *McKenzie*, *supra* note 109.

provide training in LTL weapon use, inadequacies in training may be considered to be mere negligence. This is a lesser level of governmental fault than the gross negligence required to justify federal law liability.[112]

Incomplete training of a subordinate officer does not necessarily imply gross negligence required for governmental federal law liability. Some deficiencies in training may be supplemented by supervisor oversight. But where supervisors are themselves lacking in LTL weapon training and LTL weapon use is common, gross negligence may be inferred and governmental liability found.[113]

Special LTL Concerns

Some special liability issues exist with respect to plastic bullets and flashlights used as LTL weapons. Plastic bullets are a special liability concern because their use may occasionally result in death or serious injury. The most likely situation where this can occur is when plastic bullets are used in crowd control.[114] Liability for the line officer is not likely in the crowd control scenario, since the officer was not negligent in its use and typically was ordered to fire plastic bullets to disperse a crowd. Liability for the supervisor or government will be largely dependant upon the reasonableness[115] of the order to use plastic bullets and whether supervisory training included information about the likelihood of serious injury resulting from plastic bullet use. One danger with plastic bullets and other projectile launchers/impact weapons is with their use over short distances where their launch force has not been dissipated.[116]

Metal flashlights can also be used as LTL weapons similar to the way that batons are used. Officer use of batons as a *defensive* weapon is the subject of considerable training and

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[112] *See, e.g.*, Mateyko v. Felix, 924 F,.2d 824 (9th Cir. 1990), *cert. denied*, 112 S. Ct. 65 (1991) (training consisted of 3 to 4 hours of instruction on taser but lacked information about effect of taser on human body). See also Lewis v. City of Irvine, 899 F.2d 451 (6th Cir. 1990); Beddingfield v. City of Pulaski, 861 F.2d 968 (6th Cir. 1989).

[113] *See* McQurter v. City of Atlanta, 572 F. Supp. 1401, 1420-21 (N.D. Ga. 1983), *appl. dism.*, 724 F.2d 881 (11th Cir. 1984).

[114] Plastic bullets have resulted in death when used by the Israeli army to break up demonstrations of Palestinian arabs. See also "In Maryland: Woman Killed by Nonlethal Rubber Buller Fired by Officer," *Crime Control Digest* 26(Sept. 7, 1992): 9.

[115] Part of the "reasonableness" determination will be whether the use of other LTL weapons was feasible, where these other LTL weapons were less likely to result in serious injury.

[116] Geller and Scott, *supra* note 95 at 391.

policy directives.[117] The parallel use of metal flashlights, however, has had less attention. Research indicates that metal flashlights have the potential to produce greater injury than most batons.[118] As information about the problems of metal flashlights becomes more widespread, governmental liability for failure to train (in) and set policies for their use will increase.[119]

Future Potential LTL Weapon Litigation Issues

As LTL weapons become more widespread in the police and corrections fields, the litigation involving these weapons will increase. In preparing this study, ILJ staff identified a number of potential legal issues that have not been contested to date. The most likely issues for the future include the following:

- An officer is carrying an LTL weapon but fails to use it in an appropriate situation.
- As LTL weapons become more commonplace in law enforcement, agencies without LTL weapons may be negligent for not equipping officers with LTL weapons.
- Agencies that tilt the use of force policy toward LTL weapons may create a situation where an officer is afraid to use his or her firearm in an appropriate situation.
- As with any equipment, LTL weapons use may involve a range of product liability issues.

Failure to Use LTL Weapons

The legal analysis for this issue is similiar to the issues related to use of excessive force. The same standard of "objective reasonableness" applies. In the future, an officer's failure to use an available LTL weapon may be questioned where serious injury or death results from conventional force. The officer may have a duty to use an available LTL weapon where its use will reduce the likelihood of serious injury.

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[117] See e.g., City of Naples (Fla) General Order GO-009 (Nov. 29, 1989), establishing guidelines for the use of the Monadnock PR-24 and Pr-24X batons. This directive does, however, permit baton use with "control holds" against "reluctant or resisting offenders."

[118] Terry E. Cox, Jerry S. Faughn, and William M. Nixon, "Police Use of Metal Flashlights as Weapons: An Analysis of Relevant Problems," *Journal of Poliitical Science and Administration* 13(1985):244.

[119] *Id.* at 248 (discussing Wellington v. Daniels, 717 F.2d 932 (4th Cir. 1983)).

Scenario: An officer responds to a disturbance call in a retail store. At the scene, the officer finds an emotionally disturbed subject who is wielding a hammer. The subject refuses to comply with the officer's order to drop the hammer. The officer has a chemical spray canister on his utility belt. The subject approaches the officer with the hammer. The officer fires his handgun to subdue the subject.

The standard for testing whether an officer used appropriate force will require that all available means to subdue the subject be considered. As a practical matter, this means that LTL weapons use must be considered before resort to more deadly force. An officer may have to explain why an LTL weapon was not used, even though it was available. The degree of "reasonableness" needed to justify the resort to the officer's handgun may reach a higher level. Juries may begin to expect an officer to use an LTL first, in the above scenario, before using the firearm. Failure to use an LTL weapon may result in the loss of a self defense justification for the use of deadly force.[120]

Officer non-use of an available LTL weapon can also implicate the training that officers have received in the use of LTL weapons and agency policy regarding their use. Thus, governmental liability is also at issue where governmental policies "cause" LTL weapon non-use.

LTL Weapons Unavailable

In the future, LTL weapons may become as prevalent as police handguns and batons. When LTL weapon availability and use becomes a commonplace practice, but LTL weapons are not available in a specific agency, the local government may have to defend itself from negligence and deliberate indifference allegations for not making LTL weapons available to officers. Juries may determine that the local government has a duty to provide officers with an alternative to deadly force against citizens. The issue will come down to weighing the cost of equipping and training the officers with LTL weapons versus the priority of saving lives.

A variation of this issue may arise with the policy on carrying off-duty weapons. Most agencies allow, or even require, officers to carry their handguns while off-duty. Agencies that recognize the need for equipping all officers on duty with LTL weapons may have to develop policies relating to carrying LTL weapons off-duty. The same standards for having LTL weapons accessible will apply to off-duty encounters between officers and subjects, where the

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[120] See generally Note, "Police Liability for Creating the Need to Use Deadly Force in Self-Defense," *Michigan Law Review* 86(1988): 1982, citing Young v. City of Killen, 775 F.2d 1349 (5th Cir. 1985) (civil liability). But see Greenidge v. Ruffen, 927 F.2d 789 (4th Cir. 1991).

officers become involved in official actions. The off-duty weapons policy clearly contemplates the likelihood of such incidents. Agencies have never required officers to carry batons off-duty because of the inability to conceal the weapon. However, small canisters of chemical spray are as concealable as handguns for off-duty use.

As LTL weapons proliferate, agencies must also guard against drafting policies that tilt the requirements for using available weapons too far in favor of LTL weapons. Such an imbalance may result in creating fear and excessive caution in officers who may have to make split-second decisions on deploying weapons in self defense or defense of others.

Product Liability

Manufacturers of commercial products are expected to design their products to minimize the likelihood of unanticipated injuries to users or other parties. Failure to take all reasonable steps to reduce damages caused by the product can result in product liability for the manufacturer. Proof of this negligence in manufacturing imposes absolute liability upon the manufacturer.[121]

Product liability principles apply to LTL weapons. An officer or governmental body charged with negligent use of an LTL weapon may contend that any negligence in weapon use was the fault of the manufacturer, not the officer or agency. Where the plaintiff has not brought suit against the manufacturer, an officer or governmental-defendant can implead the manufacturer to force the manufacturer to take the place of the original defendant.[122]

The most common form of product liability involves product defects that only arise under specified use conditions. Manufacturers are required to warn users of their products of any limitations upon product uses or what precautions are required under differing use conditions.[123] A previous scenario discussed potential officer liability for negligent misuse of an LTL weapon through failure to follow use instructions. Officer negligence requires a finding, however, that use instructions were provided and the instructions covered the situation involved. Manufacturers are responsible for warning users of all potential dangers except where the

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[121] RESTATEMENT (2d), TORTS, § 402A. *See also* W. Page Prosser, Robert E. Keeton, Dan B. Dobbs, and David S. Owen, *Prosser & Keeton on Torts,* 5th ed. (St. Paul, Minnesota: West, 1984), pp. 692-702. See generally James A. Henderson Jr. and Aaron D. Twerski, "A Proposed Revision of Section 402A of the Restatement (Second) of Torts," *Cornell Law Review* 77 (1922): 1512 .

[122] FED. R. CIV. PROC., Rule 14.

[123] See generally Prosser *et al.*, pp. 697-8.

dangers from the product's use are so clear as to be generally known and recognized.[124] Conversely, manufacturer's may defend against liability with the contention that the LTL weapon was misused by the officer, against expressly written warnings.

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[124] Ussery v. Federal Laboratories, Inc., No. 72-1679, 80, Slip opinion, (4th Cir. December 19, 1973) (dissenting opinion) (tear gas billy).

Chapter 6

Use of Force Policies

One of the most important policies in a police or sheriff's department is its "Use of Force" policy which contains guidelines and limitations on use of lethal and LTL force by department personnel. It gives direction on when officers should use lethal force, when they should use less than lethal force, what weapons they are authorized to carry (including off-duty provisions), training requirements for all weapons, and reporting requirements when weapons are used.

This chapter discusses several topics that ordinarily fall under "Use of Force" policies. It describes approaches to policy development suggested by two national organizations, then gives results of our review of 96 policies from police and sheriffs departments. The emphasis continues to be on LTL force, but lethal force must also be discussed to get a complete picture of policy issues. Use of force policies become more important with the increasing number of LTL weapons on the market. When departments select the LTL weapons they believe are most appropriate to their activities, they must also develop guidelines on proper use. Failure to provide adequate policies can result in misuse of LTL weapons that may, in turn, cause injuries and deaths.

Developing a policy statement on the use of LTL force is not a straightforward task. If more than one LTL weapon is available, guidance must be provided on when to select one weapon over another. When should an officer use a baton, rather than chemical spray? When may an officer use a flashlight as a weapon? Should officers be instructed not to carry certain types of LTL weapons? Policies should also contain provisions on training and reporting requirements. How much training should an officer initially receive? How much retraining and how often? Should reports be completed on all incidents involving LTL weapons or only incidents resulting in injuries? There are no universally accepted answers to these questions. Instead, our review shows several approaches that departments have taken in formulating policies.

The national organizations that have developed policy guidelines are the Commission on Accreditation for Law Enforcement Agencies (CALEA) and the International Association of Chiefs of Police (IACP). CALEA has established standards for use of force policies and the IACP has a model policy on use of force. Many departments take these guidelines as starting points and make modifications to comply with state laws and to reflect local law enforcement philosophies.

The following sections discuss the CALEA standards and the IACP model policy, then present an analysis of policies from a sample of 96 police and sheriffs departments.

CALEA Standards

CALEA was formed in 1979 as a voluntary accreditation program for law enforcement agencies. It is a joint effort of the Commission and four law enforcement member organizations (IACP; National Organization of Black Law Enforcement Executives; National Sheriffs' Association; and Police Executive Research Forum). The Commission grants accreditation to law enforcement agencies that meet or exceed the set of applicable professional standards established by these organizations. CALEA has developed over 900 standards divided into 49 topics.[1] The standards are periodically updated in coordination with the four participating associations.

The accreditation process includes an on-site assessment by a team of assessors that determines whether the agency complies with all applicable standards. Accreditation is generally a five-year process, and most departments designate an accreditation manager to oversee the internal process for meeting standards. CALEA also offers a reaccreditation process to ensure that departments remain in compliance with its standards.

CALEA Standard 1.3, *Use of Force*, provides 16 standards on lethal and LTL force (see Exhibit 6-1). Fourteen standards call for the development of *written directives* stating the department's specific policies and procedures on use of force.[2] These standards require written directives governing when an officer may use deadly force, use of deadly force against a "fleeing

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1 See *Standards for Law Enforcement Agencies: The Standards Manual of the Law Enforcement Agency Accreditation Program* (Fairfax, Virginia:Commission on Accreditation for Law Enforcement Agencies, 1989).

2 CALEA defines a *written directive* as "any written document used to guide or affect the performance or conduct of agency employees. The term includes policies, procedures, rules and regulations, general orders, special orders, memorandums, and instructional material" (see page 1-4 of CALEA Standards).

felon," discharge of warning shots, annual qualification with authorized firearms, and use of nonlethal weapons.

Exhibit 6-1
CALEA Standard 1.3—Use of Force

Standard	
1.3.1	A written directive states personnel will use only the force necessary to effect lawful objectives.
1.3.2	A written directive states that an officer may use deadly force only when the officer reasonably believes that the action is in defense of human life, including the officer's own life, or in defense of any person in immediate danger of serious physical injury.
1.3.3	A written directive specifies that use of deadly force against a "fleeing felon" must meet the conditions of standard 1.3.2.
1.3.4	A written directive requires that all sworn personnel be issued copies of and be instructed in the policies described in standards 1.3.1 through 1.3.3 before being authorized to carry a firearm.
1.3.5	A written directive governs the discharge of "warning" shots.
1.3.6	A written directive governs the carrying of side arms and ammunition while off duty.
1.3.7	A written directive governs the use of nonlethal weapons by agency personnel.
1.3.8	A written directive establishes criteria for authorizing the carrying of nonissued, personal firearms.
1.3.9	A written directive requires that a written report be submitted whenever an officer discharges a firearm, other than in training or for recreational purposes.
1.3.10	A written directive requires that only officers demonstrating proficiency in the use of agency-authorized firearms, in addition to authorized side arms, be allowed to carry such weapons.
1.3.11	A written directive requires each sworn officer to qualify at least annually with any firearm that the officer is authorized to use.
1.3.12	A written directive requires that only weapons and ammunition meeting agency-authorized specifications be used in the performance of duty.
1.3.13	A written directive requires a written report be submitted whenever an officer (1) takes an action that results in (or is alleged to have resulted in) injury or death of another person; and/or (2) applies force through the use of nonlethal weapons.
1.3.14	The agency has a procedure for reviewing incidents in which there is application of force through the use of a weapon by agency personnel.
1.13.15	The procedures required in standard 1.3.14 include a report of findings to the agency's chief executive officer.
1.13.16	A written directive requires the removal of any officer from line-duty assignment, pending administrative review, whose use of force results in a death or serious physical injury.

With some standards, a department has leeway on how it will meet the requirements. Standard 1.3.6 allows a department to specify the circumstances under which an officer may carry a firearm and ammunition while off duty. If a department decides that its officers should never carry weapons while off duty, then the standard is satisfied. It is also satisfied when a department mandates that officers always carry their weapons off-duty or when a department lists other guidelines in its directive. The point is that the department must make decisions and specify these decisions in its written directives.

Other standards have specific requirements that must be articulated in written directives. Standard 1.3.16 requires removal from line-duty assignment, pending administrative review, an officer whose use of force results in death or serious physical injury. In addition, while standard 1.3.5 calls for a written directive "governing the discharge of warning shots," CALEA's position, as stated in its commentary to this standard, is that warning shots should not be used because they pose a danger to officers and citizens.

Several standards relate either directly or indirectly to LTL force. The first standard says that personnel will use "only the force necessary to effect lawful objectives." This standard clearly applies to the use of impact and chemical weapons in situations where deadly force is not warranted. Standard 1.3.7 states that a department must establish a written directive on "the use of nonlethal weapons by agency personnel," and standard 1.3.13 requires a written report whenever an officer "applies force through use of nonlethal weapons." The last three standards call for procedures for reviewing use of force incidents, reporting the findings to the agency's chief executive officer, and removing from line-duty assignment an officer whose use of force results in a death or serious physical injury. A department can elect to apply these standards to LTL force incidents.

IACP Model Policy

The IACP established its National Law Enforcement Policy Center in 1987 under a grant from the Bureau of Justice Assistance. The objective of the Center is to assist law enforcement agencies in developing and refining policies. It operates under the direction of an advisory board of law enforcement professionals and has developed model policies in several key areas. Appendix B contains a copy of the Center's model policy on use of force. It is intended as a guide for law enforcement agencies interested in developing a complete policy on use of force. The Center encourages departments to modify the model policy as needed to comply with state law and reflect local philosophies.

The first section of the IACP model policy states that its purpose is to "provide police officers with guidelines on the use of deadly and nondeadly force." It then gives the following statement:

> This department recognizes and respects the value and special integrity of each human life. In vesting police officers with the lawful authority to use force to protect the public welfare, a careful balancing of all human interests is required. Therefore, it is the policy of this department that police officers shall use only that force that is reasonably necessary to effectively bring an incident under control, while protecting the lives of the officer or another.

The policy defines *deadly force* as "any use of force that is likely to cause death or serious bodily harm" and *nondeadly force* as "any use of force other than that which is considered deadly force."

Deadly force is the primary subject of the model policy, which contains recommended policy statements on when to use firearms, prohibition of warning shots, training needs, off-duty carrying of firearms, reporting requirements, and administrative review of critical incidents. For LTL weapons, the policy states that "officers should assess the incident in order to determine which nondeadly technique or weapon will best de-escalate the incident and bring it under control in a safe manner." It says further that officers should not be permitted to carry an LTL weapon unless qualified in its use as determined by training procedures, and it calls for a written report whenever an LTL weapon is used on a person. The IACP also recommends that the policy include a list of the LTL weapons authorized by the department for sworn personnel.

Both the CALEA standards and the IACP model policy advocate that police officers use only the amount of force needed to effectively bring a situation under control. With regard to LTL weapons, both recommend incident reports whenever an officer uses an LTL weapon, regardless of the extent of injuries. CALEA standard 1.3.14 calls for a procedure for reviewing incidents in which there is an application of force, but it leaves leeway on exactly what types of cases will be subject to the review procedure. The IACP policy calls for administrative review of "critical incidents" and allows the department to determine what falls into this category.

LTL force is a relatively small part of both the CALEA standards and the IACP model policy. Only two CALEA standards deal directly with LTL force (1.3.1 and 1.3.7), although a department can chose to apply several others to LTL force. The IACP offers complete policy statements on parameters for the use of LTL force, training needs, and reporting requirements for each use of LTL weapons, but the majority of the model policy deals with deadly force issues.

In summary, the CALEA standards and the IACP model policy have many similarities in regard to what topics should be covered in a use of force policy and generally what the policies should state. The two approaches appear to have the same viewpoints on LTL force. The primary difference between the two approaches is that the IACP offers complete policy statements while the CALEA standards offer guidelines for policy statements. The IACP claims that its model policy satisfies CALEA standards, but Geller and Scott (1993) dispute this claim because they see differences in the "fleeing felon" provisions.[3]

CALEA is currently reviewing its standards in all 49 areas and the IACP is revising its model use of force policy. Changes are expected, but these changes will not be formulated until the end of 1993.

Review of Use of Force Policies

As part of this project, ILJ staff reviewed use of force policies from 96 police and sheriffs departments. Some policy statements came from survey respondents. Others are from departments accredited through the CALEA process. Therefore, the policies are a *convenience* sample, rather than a *randomly selected* sample. No attempt should be made to extrapolate the results from this section to all law enforcement agencies. Instead, the review offers an opportunity to see how some departments have addressed difficult issues in their use of force policies. Some departments have followed the CALEA standards very closely, even to the extent of referencing specific standards within policy statements. Other departments have basically adopted the IACP model policy with few changes. Still other departments have developed policy statements that do not resemble either of these models. In this section, we provide examples to illustrate the different approaches to policy development.

The review of policies concentrated on seven topics as follows:

- Policy purpose
- Definitions of lethal and LTL force
- Lists of authorized and unauthorized weapons
- Training requirements
- Avoiding excessive force
- Medical aid
- Reporting requirements

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[3] William A. Geller and Michael S. Scott, *Deadly Force: What We Know* (Washington:Police Executive Research Forum, 1993), p. 255-256.

Exhibit 6-2 summarizes the number of departments from our sample that include provisions for each topic. Virtually all departments provide policy statements about use of force and list the lethal and LTL weapons authorized for use by officers. Fewer departments provide guidelines on avoiding excessive force, on specifying unauthorized weapons, and on arranging for medical aid. The following sections discuss each policy area.

Exhibit 6-2
Summary of Policy Analysis
(n=96)

Policy Area	Number with Policy Area	Percent
Policy Purpose	87	90.6
Definition of LTL Force	46	47.9
List of Authorized Weapons	93	96.9
List of Unauthorized Weapons	44	45.8
Training Requirements	60	62.5
Avoiding Excessive Force	49	51.0
Medical Treatment	32	33.3
Reporting Requirements	70	72.9

Policy Purpose

Virtually all 96 polices include a statement about the purpose of the policy. Many policies either have copied the "Purpose" section from the IACP model or have modified it to emphasize particular points. A variation emphasizing the use of verbal approaches before invoking physical force is provided in the following police department policy:

> In a complex urban society, officers are daily confronted with situations where control must be exercised to effect arrests and to protect the public safety. *Control may be achieved through advice, warnings, and persuasion, or by the use of physical force*. While the use of reasonable physical force may be necessary in situations which cannot be otherwise controlled, force may not be resorted to unless other reasonable alternatives have been exhausted or would clearly be ineffective under the particular circumstances. Officers are permitted to use whatever force that is reasonable and necessary to protect others or themselves from bodily harm. [Italics added for emphasis.]

Another policy emphasizes the *situations* for which force may be required:

> It is the policy of this police department that officers may use whatever force that is reasonably necessary to *overcome resistance from a person being taken into custody, to stop an assault of a third person, in self-defense, or as reasonable and necessary to perform his police functions.* Officers who use deadly force will be guided by state law and will use such force only when there are strong and compelling reasons, and only as a last resort. [Italics added.]

An important common term found in virtually all the purpose statements is *reasonable force* or *reasonable and necessary force*. This term has enough significance that many policies include a definition. One department defines *reasonable and necessary force* as "that degree of force required to overcome the resistance actually encountered." CALEA standard 1.3.2 is based on the term *reasonable belief*, which CALEA defines as "The facts or circumstances the officer knows, or should know, are such as to cause an ordinary and prudent person to act or think in a similar way under similar circumstances." Accredited departments tend to include this definition in their policies. At least one state defines *reasonable belief* in its state statutes as meaning "the person concerned, acting as a reasonable man, believes that the described facts exist." Regardless of the exact term, the intent behind these definitions is clearly to limit the actions of officers to only the force necessary under the circumstances.

One policy has a very cogent preface that highlights the importance of use of force policies in comparison to other policies:

> Abuse by police officers of the authority to use force violates the trust the public has given to the police, causes public indignation, and erodes citizen support. Without the confidence, respect, and cooperation of the community, the total police effort may be seriously handicapped. In that the unnecessary use of force is contrary to law, places the city in a position of civil liability, and the officer in jeopardy of civil and criminal liability, it is prohibited by these policies.
>
> No other area of police work is so sensitive as use of force or as important to the implementation of the department's peace keeping mission. In no other area is the exercise of sound judgment by the individual police officer and conformity to department policies and procedures more necessary.

Definitions of Lethal and LTL Force

Virtually all the policies give a definition for *lethal* or *deadly force*, and about half also include a definition for *less than lethal* or *nondeadly force*. Many departments were guided by

the IACP definition that *deadly force* is "any use of force that is likely to cause death or serious physical injury." Nondeadly force is defined simply as force other than that which is considered deadly force.

The following statement from a policy expands the concept of lethal force to recognize that LTL weapons can cause lethal force:

> Lethal force shall mean force used with the purpose of causing, or which will create a substantial risk of causing, death or serious bodily harm. The discharge of a firearm will be considered to be use of lethal force, however, *lethal force can also be expanded to include the use of nonlethal weapons and force, if the intent in their use is to cause serious physical injury*. [Italics added.]

Several policies include the CALEA definition for *serious physical injury*: "a bodily injury that creates a substantial risk of death; causes serious, permanent disfigurement; or results in long-term loss or impairment of the functioning of any bodily member or organ."

Another department goes even further in defining lethal force as follows:

> . . . any force which is likely to cause death or serious physical injury, which includes, but is not limited to: (a) the firing of a firearm in the direction of a person to be arrested, even though no intent exists to kill or inflict great bodily harm; (b) the firing of a firearm at a vehicle in which a person to be arrested is riding; (c) the ramming of a vehicle or the use of a stationary roadblock; and (d) the use of any weapon/other force which may likely result in death or serious physical injury.

This definition recognizes force as a more general problem that includes use of firearms, police vehicles, and LTL weapons.

Some policies also expand the definition of LTL force. One department divides LTL force into *restraining force*, *physical force*, and *defensive force*, with the following definitions:

> Restraining force: Force limited to holding and restraining persons, including but not limited to, armlock and take-down holds, but not including carotid artery holds.
>
> Physical force: Pain-inflicting submission holds to overcome resistance to arrest.
>
> Defensive force: Physical battery with hands, fists, defensive equipment to overcome violent resistance or to protect self or others from assault or injury.

The policy states that LTL force includes the use of LTL weapons in any of the above ways.

The advantage of these expanded definitions is that they are more specific on what constitutes lethal and LTL force. With the increase in LTL weapons, it is advisable for policies to define both lethal and less than lethal force. Several policies recognize that lethal force can occur with vehicles and LTL weapons, and these departments expand their definitions to make clear that lethal force goes beyond use of firearms. In addition, several departments have recognized that the definition of less than lethal force should be more than merely "force that is not lethal," and have expanded their definitions of LTL force.

Lists of Authorized and Unauthorized Weapons

Virtually all the policies include lists of lethal and LTL weapons that officers are authorized to use. For example, typical policies state, "A department approved police baton is the only authorized nonlethal weapon," or "Sworn members of this agency are allowed to carry a straight baton and chemical mace as nonlethal weapons."

About half the policies list unauthorized weapons or contain a statement to the effect that officers may carry only equipment and nonlethal weapons issued by the department. One policy states, "At no time is any member of this department to carry or use a 'blackjack,' 'sap,' or similar weapons containing a weighted spring device encased in leather or other such material." Another says, "Officers are not allowed to carry saps, blackjacks, billy clubs, brass knuckles, sap gloves, slapjacks, or nunchakus."

Departments that allow officers to carry personally purchased LTL weapons have slightly different terminology in their statements on authorized weapons. For example, the statement, "Sworn police personnel will be issued one nonlethal weapon, the defensive baton" leaves open the possibility that officers can carry other weapons. In fact, the policy just quoted goes on to say, "In the event a police officer uses force by means of a nonlethal weapon (e.g., mace), an incident report and use of force form will be completed."

The availability of several LTL weapons for an officer necessitates policy direction on when one weapon should be used rather than another. One way of approaching this problem is to give guidance on the order in which force should be used, with exceptions for extenuating circumstances. For example:

> The degree of force used depends on what the officer perceives as reasonable and necessary under the circumstances. Officers should assess each incident in order to determine which technique or less than lethal weapon will best de-escalate and bring an incident under control in a safe manner. Officers may resort to a more severe use of force to overcome

either increasing resistance or an increasingly dangerous threat to public safety or the officer. The levels of control are:

- Verbal direction
- Empty hand control
- Approved chemical sprays
- Handcuffs or other approved restraining devices
- Approved baton

Another department gives the following approach:

> Prior to engaging in nonlethal force with a person, the officer should, in the initial stages of the confrontation, attempt to resolve the matter by use of verbal persuasion. If the situation escalates further, officers should limit their response to what is necessary to accomplish their lawful objectives. This would include verbalizing at a safe distance until reinforcements or specialists could arrive on the scene if at all possible. In any event, officers should use discretion when using less than lethal force and adhere to the escalation of force as follows when circumstances necessitate the use of force:
>
> - Verbalization
> - Restraint techniques
> - Personal weapons
> - Impact weapons
> - Firearms

Statements about flashlights show the greatest variations in the policies. On the one hand, departments issue flashlights for the specific purpose of providing illumination. As one policy states, "Flashlights will be used for illumination purposes only!" On the other hand, a flashlight can be a weapon available to an officer in an emergency.

The ambiguity created by the issuance of flashlights is apparent in the following policy statement, which first says that a flashlight is not a weapon, but then gives guidelines on its use as a weapon:

> *The department does not recognize a flashlight as a formal police weapon.* However, the department does recognize that, in extenuating circumstances, the potential for a member's using a flashlight as a weapon is not improbable. In such cases, *when a flashlight is utilized in an application of force*, whether to restrain or to effect an arrest, or in defense against an attack, *it will be considered a weapon* and all requirements pertaining to the use of force and the reporting of such force will be applicable. [Italics added.]

Most policies view flashlights as defensive weapons for use only when absolutely necessary and until other means become available. One of the better policy statements gives specific guidelines on flashlight use:

> The flashlight may be used as an impact weapon instrument in those situations where:
>
> a. The firearm is not warranted; or
> b. The officer cannot safely obtain his/her baton or firearm; or
> c. The officer's life or the life of a third party is threatened and use of a firearm would create a greater risk of harm to the officer or member of the public.

Finally, one department gives instructions clearly intended to discourage the use of a flashlight as a weapon: "The flashlight should be carried in the officer's non-gun hand. The palm should be facing down with the flashlight extending along the forearm."

In summary, most policies include lists of authorized lethal and LTL weapons. Many policies take the extra step of listing weapons that officers are not authorized to carry. Some policies also include statements on a continuum or escalation of force. These always state, however, that the appropriate level of force must be selected based on the particular circumstances. Finally, there is considerable confusion in the policies on the use of flashlights as LTL weapons.

Training Requirements

More than half the policies (63 percent) incorporate some form of training guidelines for LTL weapons. The majority of these are brief statements to the effect that "each officer must pass a training course in the use of department issued weapons and must be recertified at least once every two years." Such a statement is acceptable because most departments have separate policies and procedures covering recruit and in-service training, which include detailed training requirements for lethal and LTL weapons.

Policies occasionally contain details about training requirements. For example, one policy gives training requirements for officers and designated instructors, as follows:

> A minimum of 16 hours of training is required for basic side-handle baton certification. Training will be conducted by certified department instructors only, and the training section shall maintain current records of certification and recertification. To maintain basic certification, the designated personnel are required to undergo eight hours of refresher training at two-year intervals or pass proficiency and written tests designated by the training section staff.

> To qualify as a certified department instructor in the side-handle baton, an employee must attend 40 hours of training conducted by a certified department instructor or other certified instructor. To maintain certification as a department instructor, a minimum of eight hours of training per year is required. Recertification will be required every three years. Department instructors will be subject to yearly evaluation by the training section staff in order to ensure that the criteria for the instructor positions are being met. The training section staff can order such an evaluation of any instructor at any time.

Another policy includes a full page on training that discusses how often each officer shall be trained, what weapons and tactics they need recertification in, and who is authorized to provide the training. It also includes a training syllabus prepared by the lead instructor. For officers who fail to obtain certification or recertification, the policy states, "A list of officers failing to attend or pass the required training shall be prepared and forwarded to each Division Commander for appropriate corrective action."

Avoiding Excessive Force

As previously discussed, the CALEA standards and the IACP model policy include statements about minimizing the force necessary for an incident. CALEA standard 1.3.1 requires a written directive stating that personnel "will use only the force necessary to effect lawful objectives." The IACP model policy says that "police officers shall use only that force that is reasonably necessary to effectively bring an incident under control, while protecting the lives of the officer or another."

About half the policies went beyond these basic requirements to include specific statements on avoiding excessive force with LTL weapons. A general statement from one policy reads as follows:

> The force used shall be no greater than is necessary and reasonable in a given situation. *The amount and degree of force which may be employed will be determined by the surrounding circumstances including, but not limited to*: (a) the nature of the offense; (b) the behavior of the subject against whom force is to be used; (c) actions by third parties who may be present; and (d) physical odds against the officer; and (e) the feasibility or availability of alternative actions. [Italics added.]

The misuse of batons is a frequent topic in statements about use of excessive force. One policy gave specific guidelines as follows:

When the use of the baton is necessary, these guidelines shall be followed:

a. *Blows capable of inflicting possible fatal or permanent injury must be avoided.* For example, blows to the head, temple or throat can result in serious injury or even death; blows to the abdomen, groin or kidney areas can also be critical or fatal.

b. *The baton should not be raised above the head to deliver a blow.* Overhead swings of the baton are easily blocked and also make it possible for the baton to be taken from the officer and used against him. [Italics added.]

Excessive use of force is also a concern with chemical sprays. One policy gave the following instructions:

> Chemical spray should be used on subjects more than three feet away from the officer. It should be used on subjects less than that distance only in emergency conditions. The duration of the application should be limited to the absolute minimum required to effectively control the subject. Normally this requires no more than a one-second application.

The recent report of a death in Concord, North Carolina, illustrates that precautions may be needed in the application of chemical sprays.[4] Angelo Robinson died after pepper spray triggered bronchial spasms. Mr. Robinson was in the custody of the Concord police when the death occurred. The state autopsy report said that his reaction to the pepper spray was aggravated by underlying medical conditions. Several questions have not been answered about the death, including whether or not officers used long spurts of pepper spray rather than the recommended short bursts.

Another policy gave specific guidelines on when not to use chemical mace:

Chemical mace will *not* be used for the following:

a. As a threat to make a person comply with an officer's verbal order when no physical violence is imminent.
b. To elicit information from a person.
c. As retaliation for verbal or physical abuse.

Because of the Rodney King incident in Los Angeles and other incidents involving batons, we can expect stronger policy statements about use of excessive force. In addition, many departments are switching from CN/CS sprays to OC sprays. These departments may experience more applications of chemical sprays simply because the OC sprays have fewer contamination

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4 "Autopsy Report Prompts Concerns About Pepper Spray," *Crime Control Digest* Vol. 27, No. 37, September 13, 1993.

problems than CN/CS sprays. As a result, departments with chemical sprays may expand their policies to ensure that these sprays are not misused.

Medical Aid

Chapter 4 discussed potential legal liabilities associated with failure to arrange for medical aid in circumstances where a reasonable person would have recognized the need for aid. Given the possible consequences, it is surprising that neither the CALEA standards nor the IACP model policy include provisions about medical aid. Only about one-third of the policies examined for this study specifically address medical aid after use of force. These policies almost always include chemical sprays as one of the authorized LTL weapons for officers.

Some policies give broad guidelines for medical aid: "Following the use of any type of force in which an injury or possible injury has been incurred by the subject, the subject shall be given medical attention if he requires such attention. He also shall be given medical attention if it is at all indicated as remotely necessary; where doubt exists, a doctor shall be consulted."

Another policy included the following statement:

> After any level of less than lethal force is used, an employee shall immediately evaluate the need for medical attention or treatment for that person upon whom the force was used and arrange for such treatment when:
>
> 1. The person has a visible injury; or
> 2. The person complains of injury or discomfort, or requests medical attention.

Another policy mandates medical attention whenever a chemical spray is used: "Any officer who uses the chemical agent on a person will provide medical treatment at any hospital emergency room." Other policies include instructions on what to do after spraying a person, such as, "wash the contaminated area with a cool solution of soap and water or flush profusely with cold water three to four minutes."

Reporting Requirements

Over two-thirds of the policies reviewed for the study contain specific provisions about reporting incidents involving LTL force. The CALEA standards and the IACP model policy ask for reports on any incident involving an LTL weapon. Most policies that discuss reporting requirements provifdė guidelines such as these:

> Every use of non-deadly force shall be reported. These reports shall specifically address the use of less than lethal force and any other action which resulted in injury, including traffic accidents.

Other policies require reports only when extenuating circumstances, such as an actual injury, occur because of the use of LTL force. One policy statement takes a middle ground between these two approaches and states: "Whenever physical force, forearms, mace, or any other weapon is used beyond the restraining stage by a member for any reason, he will file a Use of Force Report form, and submit it to the supervisor as soon as circumstances allow."

Conclusions

Can LTL weapons and policies make a difference? The New York City Police Department experienced a significant reduction in shootings by police over the decade of the 1980s. Geller and Scott (1993) quote then-Commissioner Lee P. Brown as attributing the decrease to several factors, including LTL weapons and stronger policies on use of force:[5]

> The 12.6 percent decrease in police-involved shootings–from 377, involving 491 officers, in 1980, to 329 incidents and 415 officers in 1989–was attributable to the department's increased use of non-lethal weapons, its comprehensive training in the use of force, and guidelines . . . that [encompass] "one of the nation's most restrictive firearms policies."

In order to make a difference, a department must develop a clear and comprehensive policy on use of force. Our review indicates that most use of force policies should be stronger in several areas. The policy should start with a strong statement on unnecessary use of force and should indicate this policy is one of the most important policies for officers. Complete definitions of both lethal and LTL force should be delineated. Lists of authorized lethal *and* LTL weapons should be included in the policy. The policy should also discuss a continuum of force moving from verbal persuasion to deadly force. It should clearly state that every available effort should be made to resolve a situation before going to LTL and lethal force. The circumstances for which officers may use flashlights as LTL force should be clearly stated. Policies on use of excessive force should include specific statements about other LTL weapons, particularly batons and chemical sprays. They should also provide adequate requirements for training and recertification in use of LTL weapons as well as the conditions and procedures for reporting lethal and LTL force incidents. Finally, a use of force policy should give guidelines on when officers should seek medical attention for individuals against whom force was used.

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5 "Deadly-Force Policy OK'd: NYPD Doing Well, Could Do Better." *Law Enforcement News,* November 15, 1990, as quoted in Geller and Scott (1993), p. 260.

Chapter 7

Conclusions and Recommendations

Several conclusions and recommendations can be made about LTL force. Most of these are supported directly by our survey results, case studies, legal analysis, and policy reviews. Some recommendations have appeared elsewhere in the literature but are worthy of comment because our results support them.

LTL Weapons Technology Has Improved

There is no doubt that many improvements have taken place in weapons technology over the last 20 years. Several examples highlight the changes. The recently developed OC sprays have three primary advantages over CN/CS mace products. First, OC is effective on individuals who are intoxicated or high on drugs. In the past, assaults on officers have occurred because CN/CS failed to have any noticeable effect on these individuals. While no statistics are available, our interviews with agencies issuing OC indicate that their officers are experiencing fewer attacks. Secondly, OC is effective with vicious animals. Officers interviewed during our site visits indicated successful use of OC against attacking dogs. Many postal employees also carry OC to ward off attacks by stray and unleashed dogs. Thirdly, OC presents fewer decontamination problems than tear gas. As noted in Chapter 3, some officers are reluctant to use mace because of the effort and problems associated with decontaminating themselves and the affected individuals.

Several survey respondents and site personnel praised the advantages of side-handle batons over conventional or straight batons. The baton's design with its perpendicular handle attachment offers greater officer protection, especially from overhead or downward strikes. Side-handle batons are easier to use for jabs and blocks than the straight baton, and are somewhat more difficult to operate in a swinging or clubbing manner.

Finally, projectile launchers, such as the Arwen 37mm weapon, were not commercially available twenty years ago. These weapons have proven effective in many hostage and barricade

situations. A Kansas City Police Department task force study describes the following application:

> In a circumstance where a suspect is armed with a knife, ax or similar weapon, a tactical team contains the area and deploys the Arwen gun approximately 30 yards away from the suspect. The "baton" round knocks the suspect over and generally incapacitates him for a period of time. The arrest team can then move in and secure the suspect.

This type of application would not have been possible 20 years ago.

Improvements in weapons also come with some cautions. For example, it is still too early to determine the full impact of introduction of OC sprays into police operations. One fear is that officers may become "trigger happy" and draw their OC for the slightest offense. Of course, it is obviously better for officers to use OC rather than their baton or firearm. We noted in Chapter 6 that some departments have policy statements on when OC may *not* be used, such as in retaliation to a person's remarks or because a person refuses to provide information.

Another concern expressed by some officers during our site visits is that OC may be used against them. Several OC sprays are currently available for purchase by the public. Officers also gave anecdotal information that some known offenders carry OC for their own protection against other offenders. As OC becomes more popular with the public, a greater risk emerges for attacks on officers.

Departments Are Changing to OC Sprays

Our surveys confirm that many law enforcement and correctional agencies are in the process of obtaining OC sprays. OC is the first chemical spray adopted by some departments while others are switching from CN/CS to OC. Greater effectiveness of OC and fewer decontamination problems drive the change.

The IACP is currently conducting a study funded by NIJ to examine OC in more detail. The Baltimore County, Maryland, Police Department, which previously issued no chemical agents, is serving as the test site. Results from the study will provide information on the individual's behavior at the time of the encounter (calm, intoxicated, drugged, etc.), what type of force (if any) was applied against the officer, and whether injuries occurred. OC applications against animals will also be recorded. The results should provide further insight into the acquisition, training, and use of OC. Favorable results from the study will undoubtedly create more impetus for departments to adopt OC.

Significant Differences in OC Products Currently Exist

A sharp increase is occurring in the number of manufacturers that are producing OC sprays for sale to law enforcement agencies. Unfortunately, not all OC products are the same. For example, while most manufacturers use isopropyl alcohol (rubbing alcohol) as the OC carrier, others use either water or refrigeration agents. Some manufacturers make canisters that emit OC in a liquid stream, while others have canisters that emit a fine mist. Finally, some manufacturers do not use natural oleoresin capsicum. Each combination of product ingredients brings its own advantages and disadvantages.

The differences in products naturally result in differences in toxicity and health impact. Some sprays may be effective at short ranges (two to four feet), but not at longer ranges. Effectiveness on animals depends to an extent on product ingredients. The effect of inhaling strong doses of OC also varies considerably depending on the mix of ingredients in the canister.

Agencies need to develop a greater awareness of product contents as they deliberate on the type of OC spray to purchase. They should ask manufacturers to provide Material Safety Data Sheets on their OC sprays. Documentation and independent laboratory test results should be obtained on manufacturers' claims about their products. If possible, agencies should thoroughly test products prior to purchase.

LTL Weapons Vary in Effectiveness

As discussed in Chapter 3, survey respondents were asked to rate LTL weapons on four dimensions of effectiveness: effectiveness in subduing suspects, potential for citizen complaints, officer safety, and public safety. While the individual ratings are only perceptions from respondents, they are supported by comments during site visits and by other reviews on the advantages and disadvantages of different LTL weapons (see Appendix A).

The effectiveness ratings support the conclusion that OC spray, properly deployed, is a particularly useful LTL weapon. Compared to *all other* LTL alternatives included in the survey, OC received the most favorable ratings in all four categories of effectiveness. Flashlights receive the lowest ratings in all four categories. Side-handle and telescoping batons are considered more effective than conventional batons or flashlights. Finally, projectile weapons and stunning devices receive high scores for subduing suspects, fewer citizen complaints, and officer safety, but lower scores than most other weapons for public safety concerns.

Improved LTL Weapons Should Be Developed

Even though progress has been made in LTL weapon technology, improvements are still needed. In Chapter 1, we discussed NIJ's program under its Science and Technology Division to develop improved LTL weapons and related technologies to dal with violent and uncooperative behavior. Examples of LTL topics under the Division's research are pulsating disorienting lights with special goggles for officers, entanglement devices, technology to stop fleeing vehicles, airbag restraint systems for rear seats of patrol cars, sticky foam, and a velocity controlled, blunt projectile launcher. Under the Division's established criteria for improvement, any new technology must satisfy several user requirements. A new technology must:

- Serve a real need
- Improve on current practice
- Not overburden the office
- Not be prohibitively expensive
- Not require extensive training
- Not involve dedicated manpower
- Involve manageable liability questions

If successful, the technologies under consideration will alleviate several drawbacks of currently available weapons. For example, sticky foam may address many of the criticisms of electronic stun guns. Allegations against the Taser have been that it is not effective against someone wearing heavy clothes and that the electrical spark can cause scars or burn marks. The foam may be as effective as the Taser with fewer problems.

Recertification Training Needs Improvement

While training was not a primary focus of this study, the results from the surveys and case studies support the need for strong training programs with LTL weapons. Most law enforcement departments offer good initial training on LTL weapons and the training is supported by manufacturer involvement.

Recertification training is less satisfactory, particularly with impact weapons. For example, our survey results show that recruit training for side-handle batons averages about 15 hours, but annual retraining averages only 5.4 hours. On the other hand, user training for OC sprays averaged 3.6 hours during initial recruit training and the same average time, 3.6 hours, for annual retraining. As part of this project, we also reviewed several training modules for LTL weapons for both recruit training and annual retraining. Our review indicates considerably less emphasis on the recertification process.

Agencies Should Take Steps to Limit Legal Liability

Police and Sheriffs agencies can limit legal liability presented by the use of LTL weapons by (1) carefully examining and testing LTL weapons before acquiring–Why does the agency need the specific LTL weapon? In what types of situations, that have been documented in terms of frequency of occurrence, will the weapons most likely be used? (2) developing and issuing detailed policies and procedures, and (3) implementing training programs that meet and exceed the manufacturer's recommendations.

Among the types of information that should be contained in an LTL weapons policy include the following:

- Types of weapons classified as LTL (make distinctions between authorized and unauthorized LTL weapons)
- To which employees will each type of LTL weapon be issued
- Training requirements
- Clear and comprehensive directions for **when** and **how** LTL weapons may and may not be used
- Reporting requirements for LTL weapon use (including medical reports)
- How the policy will be enforced

Training in LTL weapons use provides the basic means for an agency to effectively disseminate its policy and procedures. The training should include a combination of formal classroom instruction (using the weapons in mock exercises) and on-the-job training. Agencies should also thoroughly document the type of training given to each officer for each type of LTL weapon. A basic LTL weapons training curriculum should include the following topics:

- Agency policy
- LTL weapon use within a force continuum from conflict prevention to lethal force
- Skill training –use of LTL weapons
- Problem areas–when and how **not** to use
- Medical assistance needs of subjects–e.g., possible adverse reactions to chemical sprays
- Reporting requirements
- Civil liability

Agencies should also routinely investigate all uses of LTL weapons, just as most agencies document and examine incidents of "shots fired" by officers. All LTL weapon uses should be reported and statements should be taken by all officer-witnesses at the scene. Such incident reporting is needed for several reasons: (1) to properly identify and supervise officers who may misuse LTL weapons (an early warning system), (2) to help detect deficiencies in specific LTL weapons or use situations, (3) to identify where improved training is needed, and (4) to help reduce potential civil liability.

In addition, internal affairs should investigate all allegations of excessive use of an LTL weapon. Officers repeatedly involved in excessive use of LTL weapons should be disciplined immediately and appropriately.

Policies and Procedures Need Improvement

Our analysis of use of force policies identified both strengths and weaknesses. The guidelines established by CALEA and the IACP are clearly an excellent starting point for departments in formulating their policies. Both organizations support the expansion of their guidelines to satisfy state laws and reflect local policing philosophies. As stated in Chapter 6, virtually all the policies we reviewed contain clear statements about using only the amount of force necessary for a situation, and most policies list the lethal and LTL weapons authorized for use by officers. We found, however, that many policies were weak in highlighting the importance of the policy and encouraging strict adherence to policy provisions. Many policies also fail to provide adequate guidelines on avoiding excessive force, on specifying unauthorized weapons, and on documenting the need for and arranging for medical aid.

Use of Force Policies Should Be Public Knowledge

Geller and Scott report an interesting approach proposed by Tom Potter when he was chief of police in Portland, Oregon. As part of the department's community policing philosophy, he proposed a one-day, public symposium where anti-violence strategies and the department's use of force policies would be explained. The meeting was an outgrowth of several violent incidents involving both police and citizens. The incidents included the fatal shooting of a suspected car thief by a homeowner, the death of a five-year-old boy shot in the back of the head by a suspected Bloods gang member, and the death of a prowler and his 12-year-old hostage by police during a standoff at the youth's home. The objective of this session was to educate citizens about police deadly force policies and provide them an opportunity to comment.

As more police departments move toward a community policing philosophy, policies on use of force will receive greater attention by the community. Police departments need to be prepared to discuss their policies and the rationale for their policies with the public.

Public Acceptance Issues Need to be Addressed

In 1972, a report from a conference attended by 50 experts on LTL weapons concluded that "There was general agreement that little is known about the attitudes of the general public...toward various nonlethal weapons. Research is needed to identify how users and manufacturers can more effectively gauge and take into account public attitudes towards

different weapons." Our research indicates that these comments are as true today as they were 20 years ago.

Experiences in San Diego illustrate the problems that can occur in this area. The police department received severe criticism from citizen groups over its use of nunchakus in removing abortion protesters from a demonstration. At the time of this report, the department was considering whether it should discontinue issuance of these weapons. Interestingly, the Los Angeles Police Department now limits use of nunchakus as a result of the San Diego experiences. Citizen groups hailed the decision in Los Angeles. It should also be noted that the IACP's Policy Center recommends that police departments ban nunchakus, listing them alongside blackjacks and brass knuckles as unacceptable weapons.

Police departments should obtain input from key citizen groups to determine their reactions to acceptance of a new LTL weapon. This approach also affords an opportunity for departments to explain their use of force policies.

A National Database on Excessive Force Should Be Developed

Several leading researchers, practitioners, and interest groups have expressed support for a national database system to gather information about police use of force. Geller and Scott note "It is striking that, despite substantial advances made over the past several decades in police telecommunications systems and automated data processing networks, the United States does not have a reliable data base that reports precisely how many people are killed, let alone wounded or shot at but missed, by the police nationwide."[1] Sherman and Cohn call for a "national system of reporting all deaths caused by law enforcement officers, for whatever reason, at whatever location, whether on duty or off."[2] Americans for Effective Law Enforcement, Inc., calls for a broader system that would minimally include "the number of citizens versus officer complaints, by type of allegation; number of officer versus officer complaints, by type; disposition of complaints by percentage, for each type of allegation; number of times officers have resorted to lethal and nonlethal weapons to defend themselves and/or overcome resistance."[3] This organization recommends collection of data through the Federal Bureau of Investigation's existing Uniform Crime Report system.

If a national database is established, it should include both lethal and LTL force incidents. Many departments now have policies calling for a written report on all LTL force incidents,

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1 William A. Geller and Michael S. Scott, *Deadly Force: What We Know* (Washington: Police Executive Research Forum, 1992), p. 46.

2 Lawrence W. Sherman and Ellen G. Cohn, with Patrick R. Gartin, Edwin E. Hamilton, and Dennis P. Rogan, *Citizens Killed by Big City Police, 1970-1984* (Washington, D.C.: Crime Control Institute, 1986).

3 Reported in Geller and Scott, p. 46.

regardless of the extent of injury. Our view is that more departments will adopt mandatory reporting. It should therefore be relatively easy for departments to provide information to the national database on all incidents. More detailed information needs to be submitted on incidents resulting in injury to an officer or to affected individuals.

By developing a national database, more information will become available on the scenarios in which LTL force is applied. This information will provide insights into the overall use of force by officers and assist in providing guidelines on proper use of force.

Appendix A

Less Than Lethal Weapons Information Resource

Appendix A

Less Than Lethal Weapons Information Resource

The purpose of this appendix is to provide additional information about LTL weapons. Descriptions of the following weapons are provided.

Impact Weapons
- Conventional baton (straight baton)
- Side-handle baton (e.g., PR-24)
- Telescoping (collapsible, expandable) baton
- Shepherd's crook baton (Handler 12)
- Heavy metal flashlight
- Close-range impact devices (saps, blackjack, etc.)

Chemical Weapons
- CN spray
- CS spray
- OC spray

Electrical Weapons
- Taser
- Talon
- Nova XR5000
- Source

Other Weapons
- Low-lethality projectile weapon (e.g., Arwen 37mm gun)
- Stunning devices (flash bangs, stun grenades)
- Pressure (pain) compliance device (e.g., Orcutt Police Nunchaku)

We obtained the information for this appendix from several sources. As described in Chapter 4, ILJ staff visited several agencies to obtain more detailed information about LTL weapons and their uses. This appendix includes information from these site visits. We also

quote extensively from three prior reports that looked at the advantages and disadvantages of each weapon. These reports are as follows:

> Kansas City, Missouri Police Department. *Recommendations of the Task Force on the Use of Force by the Kansas City, Missouri Police Department*. January 1991.
>
> J.P. Jamieson, R. Hull, and P. Battershill. *Recommendations of the Committee on The Use of Less Than Lethal Force by Police Officers in British Columbia.* July 1990.
>
> Americans for Effective Law Enforcement, Inc. "Use-of-Force Tactics and Non-Lethal Weaponry." *ALERT Training Guide*. 1988.

All three reports have excellent reviews of LTL weapons.

Finally, our survey instrument asked respondents to indicate specific LTL weapons that had been discontinued within the last five years and LTL weapons that were currently under consideration for purchase. Information from survey responses is included in the descriptions.

Impact Weapons

Class of Weapon: Impact

Generic Name: Conventional or Straight Baton

Brand Names: Casco, ASP, Monadnock

Descriptive Information: A baton is usually made of hard wood, metal, or plastic; its measurements can range from 1" to 2" in diameter and from 12" to 25" in length. A baton is designed for one-handed use by sworn personnel and is used for striking or jabbing a person or animal. Longer batons, in the range of 25" to 35", are sometimes called "riot batons" inasmuch as a line of officers equipped with such batons can be used to restrict access to a given place or area, or to channel persons to or from a given place or area.

Findings from the Four Sites: Alameda County uses conventional batons in both of its operations–custodial and patrol–and has done so since the 1940s. Custodial personnel may carry or not carry any of the authorized weapons: baton, MACE, and the Yawara Stick. (The Yawara stick has been described as a short stick "useful for come-alongs.")[1] Patrol personnel are required to carry the baton in response to a call for service. Other weapons are optional.

The Arlington County Police Department and the Metro-Dade County Police Department use the conventional baton although both agencies adopted the side-handle baton in 1978 and 1982 respectively. Officers on the force in Arlington County before 1978 were allowed to retain their conventional baton or to adopt the new one. The Custody Division of the Los Angeles Sheriff's Department reports 100 long batons in inventory.

Discontinued or Considered for Purchase? Thirty-seven law enforcement agencies report discontinuation of conventional batons and no departments indicated batons are under consideration for purchase. Eleven detention and correctional agencies report discontinuations; one agency reports plans to purchase batons.

AELE Training Guide Comments:

Strengths

1. It is a lightweight weapon, and inexpensive.
2. The public is accustomed to seeing police officers and security guards routinely carry them.
3. It has greater reach than blackjacks, short billies or flashlights; it has greater utility and flexibility as an impact weapon.

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1 David E. Steele, "Police Sticks," *Law and Order* (August 1992), p. 39. In William A. Geller and Michael S. Scott, *Deadly Force; What We Know* (Washington: Police Executive Research Forum, 1992), p. 366.

4 A blow with a baton can immobilize a combative person; it can disarm him if he is carrying an offensive weapon.
5. Competent training is available from a multitude of public and private trainers.
6. The baton can be used as a "come-along" device in some situations.
7. A baton can be used in a non-offensive blocking fashion, to ward off blows or push back an attacker.
8. Manufacturers recommend their products as impact weapons.

Weaknesses

1. They are cumbersome, and therefore, are often left in the car.
2. They are not concealable, and are not well suited for plainclothes officers.
3. They are often in the way when an officer is running.
4. They can be lost if they fall from a belt ring, and create a hazard.
5. It is difficult or impossible to avoid head strikes in all cases, particularly in combat situations.
6. Facial strikes often cause lacerations and substantial blood loss.
7. Departments must periodically retrain officers to maintain baton proficiency.

Class of Weapon: Impact

Generic Name: Side-Handle Baton

Brand Names: Monadnock PR-24 (uniformed personnel); PR-18 (for non-uniformed personnel); also ASP 524 side-handle baton

Descriptive Information: The side-handle baton features a side-handle grip that is attached to one end of the baton at a right angle. The grip is said to make the baton a much more defensive weapon. Training for the side-handle baton ordinarily emphasizes the defensive nature of the weapon, especially with regard to avoiding strikes to the head.

Findings from the Four Sites: For the sites visited, the year of agency adoption and reported number of batons are as follows.

Agency	Year	Number
Los Angeles County Sheriff's Department Field Operations	1977	8,000
Los Angeles County Sheriff's Department Custody Division	1980	3,000
Metro-Dade Police Department	1982	2,500
Arlington County Police Department	1978	199
Arlington County Sheriff's Department[2]	1991	6

Discontinued or Considered for Purchase? Twelve law enforcement agencies report discontinuation of the side-handle baton; three agencies indicated plans to purchase the weapon. Among detention and correctional agencies, ten indicated discontinuation and two indicated plans to purchase the weapon.

AELE Training Guide Comments: Trainers who prefer the side-handle baton (over the conventional baton) believe it generates more power, is easier to control, is more versatile, and is less likely to be seized by an opponent.

Kansas City Task Force Report Comments:

Advantages

A study of the evaluations of nine law enforcement agencies revealed the following advantages:

1. When carrying the PR-24 in a "ready position" the major portion of the baton is concealed, and therefore is less like to antagonize citizens.
2. The PR-24 provided officers greater protection (specially from overhead or downward strikes) than the conventional straight baton.
3. It is believed that use of the PR-24 reduces injuries to both subjects and officers.

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2 Warrant service deputies only; LTL weapons are not allowed in the jail.

4. The public associated the PR-24 with karate-type training, thus giving officers a psychological advantage.
5. The PR-24 is easier to retain than the conventional baton.
6. Jabs, chops, and blocks can be utilized faster and with more force than with a conventional baton.
7. The PR-24 has good strength to prevent breaking and it will not warp under intense heat or break upon impact in extreme cold. The finish keeps a professional appearance, even after long periods of use.
8. One hundred percent of test officers positively accepted the PR-24 after being trained.

Disadvantages

1. Any baton can be used as an overhead striking device, when used improperly and in violation of department policy.
2. Sixteen hours of training are needed to become proficient in the use of this baton.
3. More hours of in-service training are needed to remain proficient than with the straight baton.
4. The initial price per unit and the purchase of a belt carrying ring for each issued baton would result in high start-up costs.
5. Because of the "unbreakable" nature of this baton, in those instances where it is being used excessively, the body and/or bones of the target are subjected to greater damage.

Class of Weapon: Impact

Generic Name: Telescoping (expandable, spring-loaded) Baton

Brand Names: ASP Expandable Baton, CAS-21, Monadnock

Comments: A drawback of most batons is that they are too large and awkward to carry. Batons are sometimes left in a vehicle rather than carried to the scene. Moreover, non-uniformed personnel seldom, if ever, carry a baton. The expandable baton offers a solution to these problems. It usually consists of a two- or three-piece telescoping tubular unit with the largest section used as the handle. The weapon, however, is not without its critics–especially with regard to its mechanical aspects that may jam and render the weapon virtually useless.

Findings from the Four Sites: Telescoping batons are not currently in use at any of the four sites.

Discontinued or Considered for Purchase? None of the surveyed law enforcement agencies reported discontinuations of expandable batons. A total of 27 agencies revealed plans to purchase expandable batons. Jail administrators and wardens did not mention expandable batons.

Kansas City Task Force Report Comments:

Advantages

1. This device is small and easily carried out of sight in a pocket or sheath.
2. It is used reactively, so that a "show of force" is not present until needed.

Disadvantages

1. The telescoping batons have a smaller diameter than the normal 1.25 inch batons. When this thinner baton strikes a subject, the force generated is focused on a smaller area, which increases the risk of injury.
2. Telescoping or spring loaded batons require servicing to ensure their mechanical components are functional (straight or side-handle batons require no servicing).
3. There are occasional failures to telescope or spring, which can have serious operational consequences.

Class of Weapon: Impact

Generic Name: Shepherd's Crook Baton

Brand Names: Handler 12

Descriptive Information: The Handler 12 is a 14-inch metal bar covered with a rubber-based coating. It has a rounded handle on one end and a modified shepherd's crook on the other

Findings from the Four Sites: The Field Operations Regions of the Los Angeles County Sheriff's Department authorize the use of Handler 12s by those officers who obtain certification in their use. The rapid transit security force (the Blue Line) of the department has adopted the Handler 12 as their impact weapon.

Discontinued or Considered for Purchase? Two law enforcement agencies indicated Handler 12 discontinuations; two other agencies reported plans to purchase the weapon. Jail administrators followed suit with one discontinuation and one planned purchase. Wardens did not mention the Handler 12.

Kansas City Task Force Report Comments:

Advantages

1. Easily concealed on the officer.
2. Its new and strange look may cause possible confusion to subjects.

Disadvantages

1. It is too small to be used for blocks.
2. An officer using this device may risk wrist or hand damage if used for blocking.
3. It has limited use as an impact weapon.
4. The flat end is hard to hold onto when making strikes.
5. A subject on whom the device may be used may suffer arm or bone damage when the device is applied.

Class of Weapon: Impact

Generic Name: Heavy Metal Flashlight

Brand Names: Many possibilities

Comment: In addition to providing illumination, a heavy metal flashlight is intended as an defensive weapon in many departments. Some agencies have banned the use of flashlights as an impact weapon. Others allow it if there is no other alternative, but they often treat the application of force with a flashlight as "deadly force."

Findings from the Four Sites: The Arlington County Police Department is the only agency that supplies a heavy metal flashlight to its sworn personnel. As noted in the on-site report (Chapter 4), training is geared toward defensive/non-lethal uses of the flashlight.

Discontinued or Considered for Purchase? A total of 17 law enforcement agencies indicated that flashlights had been discontinued; two others indicated plans to purchase heavy metal flashlights. Detention and correctional agencies did not mention flashlights.

AELE Training Guide Comments:

Strengths

1. It is usually readily available, especially at night; it is considered standard equipment.
2. It does not give the outward appearance of an offensive weapon.
3. It can be used with minimal reaction time, if held in one's hand.
4. The light can temporarily disorient or impair the sight of an opponent.
5. It is "effective" as an impact weapon, in that it will deliver a heavy blow.

Weaknesses

1. Manufacturers are reluctant to approve or endorse the use of their flashlights as impact weapons.
2. Flashlights have too short a reach for effective use as a tactical weapon.
3. Flashlights provide a slower response than batons; the recovery time is not rapid enough.
4. Flashlights have sharp edges that will cut a person.
5. Multi-cell lights are very heavy; a blow to the head can be fatal or cause permanent paralysis.
6. An officer who carries a weighted flashlight and a baton will be reluctant to drop his light and pull the baton. If the officer does discard the light, it could be used as a weapon against him.

Class of Weapon: Impact

Generic Name: Close-Range Impact Devices (saps/blackjacks)

Comments: There are many types and kinds of close-range impact devices. Most feature a leather cover and a lead center–either a single piece of lead or lead shot. Ordinarily, the device is used to apply a blow to a person's heads.

In its "Use of Force" concept paper, the Policy Center at the IACP says, "The Policy Center recommends that police departments ban the use of several types of weapons. These include slapjacks, blackjacks, and brass knuckles and nunchucks [*sic*], fighting stars, and other martial arts weapons. In addition, police agencies should prohibit the use of the flashlight as a weapon unless an officer has no recourse."[3]

Findings from the Four Sites: The Los Angeles County Sheriff's Department allows the use of a sap as a close-range weapon although a number of interviewees said that the weapon had not been supplied to any new recruits for at least 10 or 12 years. Close-range devices are not allowed in any of the other three sites.

Discontinued or Considered for Purchase? Many law enforcement agencies indicated that they had discontinued several close-range impact weapons. Their breakdown by type is as follows: blackjack (10), close-range impact (3), sap (5), sap/plus another name (3), slapper (3). No departments indicated current consideration of saps for purchase. Detention and correctional agencies reported three discontinuations and no new purchases.

AELE Training Guide Comments:

Strengths

1. They are readily concealable weapons, of low cost.
2. They are easily carried, and are lightweight.

Weaknesses

1. They are too short to be an effective weapon.
2. They have sharp edges.
3. Many saps have loops, which constrict an officer's hands.
4. Because of the flexible nature of the design, they fail to generate enough shock waves to be effective.

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3 International Association of Chiefs of Police (IACP), "Use of Force: Concepts and Issues Paper," prepared by the IACP/Bureau of Justice Assistance Law Enforcement Policy Center. (Arlington, Virginia: IACP, February 1, 1989), p. 3.

5. They tend to be used with facial/head blows, with the same kind of trauma associated with flashlight injuries.

Chemical Weapons

Class of Weapon: Chemical

Generic Name: CN (Chloroacetophenone)/CS (Ortho-chlorobenzalmalononitrile)

Brand Names: CN Mace, CS Mace, and many other trade names

Effect: CN attacks the eyes and the mucous membranes. The effect includes tears and temporary loss of vision. Persons sprayed with CS experience significant irritation of the moist skin areas–mouth, nose, and sinuses. Overall, the effect of CS is much more severe than the effect of CN.

Available As: Aerosol mist or coherent liquid stream, hand-held fogger, grenades of all kinds, barricade projectiles, and others

Comments: CN's origins go back before World War I, but the chemical was not used tactically at that time. After World War I, CN was used for training troops in the use of gas masks and protective equipment. Police access to CN is traced back to the 1920s. After the Korean War, the military adopted CS as a replacement for CN. Criminal justice agencies gained access to CS in the mid-1960s. Both CN and CS are used by agencies for training as well as riot control.

Findings From the Four Sites: Three of the four sites (Arlington, Virginia; Metro-Dade, Florida; Los Angeles County) report that patrol officers are not using CN at this time. Metro-Dade Police terminated use in 1980, and the Arlington Police did so when oleoresin capsicum (OC) was adopted in 1990. Alameda County reports inventories of CN and CS gases–75 units of each one–and fewer than 10 uses per year for both chemicals.

We found CS in three of the four sites. In addition to Alameda County, the other using agencies are the Metro-Dade Police Department (since 1958, 1500 units in inventory and approximately 50 uses per year) and the Los Angeles Sheriff's Custody Division (since 1960, 133 units, about one use per year).[4]

Agencies not using CS include the two Arlington County agencies that have switched to OC and the Field Operations Regions of the Los Angeles County Sheriff's Department.

Discontinued or Considered for New Purchase? Law enforcement agencies reported 68 CN-related discontinuations (17 indicated CN, 10 indicated CN/CS, and 31 indicated Mace). Ten other discontinuations were classified as "Chemical Irritant Spray" but were not otherwise identified. In the planned purchase listing, CN is noted by only one department.

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4 LASD policies and procedures forbid using CS in a building; it is assumed that the one use would have been out of doors.

Jail administrators and wardens reported 31 CN-related discontinuations. CN was mentioned by 13 agencies, CN/CS by 3 agencies, and a combined chemical irritant spray and Mace by 15 agencies. CN was not indicated for purchase.

Kansas City Task Force Report Comments:

Advantages

1. Mace is relatively inexpensive.
2. It is light and easily carried on an officer's belt.

Disadvantages

1. Mace is not effective against all suspects and can have no effect at all on crazed or extremely intoxicated persons.
2. Mace presents serious contamination problems for police, health care, and custodial workers who have subsequent dealings with a "Mace" subject.
3. Mace has no effect on vicious dogs.
4. There are documented instances of Mace causing severe eye damage.

Class of Weapon: Chemical

Generic Name: Oleoresin Capsicum (OC)

Brand Names: Cap-Stun, First Defense, Punch II, Pepper Mace, The Guardian, Hot Stuff, Devastature, and Avenger (made for the civilian market)

Descriptive Information: An all natural substance derived from the cayenne pepper plant

Effect: OC is said to have an instantaneous effect on persons sprayed. The chemical causes a burning sensation and closing of the eyes. OC, like CN and CS, affects the mucous membranes and upper respiratory system.

Available As: Same as CN write-up

Findings from the Four Sites: The two Arlington County, Virginia, agencies have issued OC since 1990 (Police Department) and 1991 (Sheriff's Office). As noted in the three California on-site reports (Chapter 4), the Attorney General of California is considering approval of OC for use by local and state criminal justice agencies. The two California agencies have expressed an interest in adopting OC when it is approved for use. Both agencies have been using OC in a test mode since late 1992.

The Metro-Dade Police Department's use of OC is on hold until the Department's chemical weapons expert is convinced of its effects, particularly on persons with breathing difficulties. As noted in Chapter 4, the other Metro-Dade agency does not use LTL weapons.

Discontinued or Considered for Purchase? One law enforcement agency reports discontinuation of OC; however, 99 agencies report plans to purchase it at some future time. Clearly, there is a movement from CN and CS products to those products containing OC. Among detention and correctional agencies, the trend is similar although not as pronounced. One agency notes a discontinuation, and four report plans to acquire OC.

Kansas City Task Force Report Comments:

<u>Advantages</u>

1. The incapacitation effect is immediate and works on all suspects, including those who may be deranged, high on drugs, or intoxicated.
2. There are no decontamination problems (the isopropanol propellant evaporates).
3. There are no documented instances of death or serious injury occurring from usage of capsicum.
4. It is effective on vicious animals.
5. Practical considerations (shelf life, accuracy of the spray, size of the canister, amount of training needed, etc.) are all positive with respect to capsicum.
6. Reasonable cost.

Disadvantages

1. The cost of initial issue to personnel of this department.

ELECTRICAL WEAPONS

Class of Weapon: Electrical

Generic Name: Electronic Stun Devices

Brand Names: Taser, Talons, Nova XR5000

Descriptive Information: The Taser is a hand-held device that fires, with the aid of gunpowder, two barbed hooks to a distance of about 15 feet. If properly directed, the hooks affix to the subject's skin or clothing and remain attached to the hand-held device by two thin wires. Low amperage electrical current flows from the device to the subject; in most instances the current incapacitates the subject. In certain cases, especially those involving persons under the influence of certain controlled substances, the current may not incapacitate the subject.[5]

The Talon is a glove with a generator that creates an electrical discharge.

The Nova XR5000 is similar to the Taser in terms of being an electrical discharge weapon. It is a small, hand-held weapon that requires affixing two prongs to a suspect. However, the weapon's range is essentially one arm's length.[6]

Findings From the Four Sites: The Los Angeles County Sheriff's Department (LASD) uses the Taser in its custodial facilities as well as in its field operations regions–essentially the agency's patrol force. Because of several in-custody deaths involving persons under the influence of controlled substances, regulations at the LASD require that personnel with the rank of sergeant or above fire the weapon. Regulations also limit the firing to a single shot. Since these regulations were implemented, no deaths have been recorded.

The Alameda County Sheriff's Department has used the Talon in its two detention facilities since 1986. Twelve units were noted as being in service; it was estimated that uses per year would number four through twenty.

The Nova XR5000 is not being used in any of the four sites.

Discontinued or Considered for New Purchase? Four law enforcement agencies reported discontinuation of Tasers; three agencies reported plans to acquire Tasers. Jail administrators and wardens reported discontinuation of Tasers in five agencies and acquisition plans in seven agencies.

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5 J.P. Jamieson, R. Hull, and P. Bathershill, *Recommendations of the Committee on the Use of Less Than Lethal Force by Police Officers in British Columbia* (British Columbia Police Commission, July 1990), p. 20.

6 Jamieson, p. 20.

The Talon was not reported in either category by law enforcement or detention/correctional agencies.

Four law enforcement agencies report discontinuance of Nova weapons; no agency reported plans to purchase Nova weapons.

AELE Training Guide Comments:

Strengths

1. These devices are easily carried. They are lightweight and affordable.
2. Extensive training is not required.
3. They may be more effective on persons under the influence of PCP and other drugs who do not respond to chemical irritants.
4. They are especially useful for controlling non-criminal violent behavior, such as persons who are mentally impaired, or under the influence of mind-altering substances.
5. It may be unnecessary to resort to firearms to control a person armed with a knife or blunt instrument.

Weaknesses

1. There are allegations the electrical spark can cause scars or burn marks.
2. Long-term medical studies are non-existent.
3. The spark can cause a fire hazard if flammables are present.
4. Hand-held devices have been misused to produce discomfort, when administered by sadistic officers.
5. Media and constituent representatives have labeled the devices as "cattle prods," associated with civil rights demonstrations in the 1960s.
6. The manufacturers of electrical weapons may be unwilling to provide testimony or litigation support service.
7. They may not carry product liability insurance at the time the suit is filed, or the policy may not be effective for the period when the device was manufactured or sold.

Class of Weapon: Electrical

Generic Name: Close-Range Electronic Stun Device

Brand Names: Source

Descriptive Information: The Source is a flashlight with electrodes on its base. An electrical charge can be applied to an inmate or detainee when the current is turned on.

Comments: See "Talon" comments above.

Findings from the four Sites: The Source is not being used in any of the four sites.

Discontinued or Considered for New Purchase? Two law enforcement agencies reported that they have discontinued use of the Source; a warden noted one discontinuation.

Other Weapons

Class of Weapon: Other Devices

Generic Name: Low-Lethality Projectile Weapons

Brand Names: Arwen 37mm weapon

Descriptive Information: The Arwen 37mm weapon is made by the British military in two formats: (1) a single-shot and (2) a five-shot semi-automatic weapon that is said to be fast to reload. Its rifled barrel is said to ensure accuracy against man-sized targets out to a 100 meter range, and the weapon's rate of fire is 12 aimed shots per minute. Projectiles that can be fired from the weapon include rubber cylindrical batons, tear gas canisters, and stun grenades.[7] Federal Laboratories is said to supply a 37mm weapon.[8]

Findings from the Four Sites: All the large agencies possess and use Arwen 37mm weapons or their equivalent. The Arlington County agencies do not possess projectile weapons.

The Alameda County Sheriff's Department employs projectile weapons and associated ammunition in the following locations: both detention facilities, the vehicle maintained by the Special Response Unit (SRU), and patrol supervisors' vehicles. Ammunition types and numbers would be far greater in the two detention facilities and the SRU's vehicle.

The Los Angeles County Sheriff's Department uses Arwen 37mm weapons in their custodial facilities. The weapons will usually be found in the trunk of every on-duty supervisor (ordinarily a sergeant) and among the arms carried by Tactical Response Teams while in training or when activated.

The Metro-Dade County Police Department reports 13 low-lethality weapons in service. They were first acquired in 1958. As reported in the site visit write-up, approximately ten uses are noted per year.

Discontinued or Considered for Purchase? Four law enforcement agencies report plans to purchase Arwen 37mm weapons and no discontinuations. Three jail administrators report plans to purchase three weapons: Arwen (2) and a "Sage" Multi-Shot 37mm (1). Two wardens report discontinuation of Arwens.

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7 *Jane's Security and Co-In Equipment 1991, 1992.* Jane's Information Group, Survey CR52NH, U.K., p. 291.

8 Kansas City, Missouri, Police Department, *Recommendations of the Task Force on the Use of Force by the Kansas City, Missouri Police Department* (January 1991), p. 32.

British Columbia Report Comments:

Advantages (of Arwen 37mm weapon)

1. It is very accurate compared to other similar weapons.
2. The rotary magazine provides the capability of second shots if the first misses or is ineffective.
3. The baton round is of relatively low lethality and generally causes only bruising with occasional fractures.
4. The Arwen is useful for tactical purposes (tear gas, stun grenades) besides the baton round.

Disadvantages

1. The cost is very high.
2. There is no guarantee that a death will not result from use of this type of device.

Class of Weapon: Other Devices

Generic Name: Stunning Explosive (e.g., stun grenade or "flash bang")

Brand Names: Many possibilities

Descriptive Information: Stun grenades produce a loud bang together with a bright light as a diversionary tactic in cases of an armed suspect in a building or closed space, barricaded person, hostage situation, drug raid, etc.

Findings from the Four Sites: Agencies using stunning explosives include: (1) the Arlington County Police Department–essentially by its SWAT team in connection with raids on premises believed to be occupied by drug dealers; (2) the Alameda County Sheriff's Department–maintains a supply of stunning explosives in their two jails and in the vehicles assigned to their Special Response Unit; and (3) the Metro-Dade County Police Department–keeps a supply of stunning explosives (about 300 items) and notes about 210 uses per year.

Discontinued or Considered for Purchase? Five law enforcement agencies indicated plans to purchase stunning explosives; none reported plans to discontinue any stun device. One warden reported that pyrotechnic grenades had been discontinued. Two jail administrators reported plans to purchase stunning devices; one warden reported plans to purchase stunning explosives.

British Columbia Report Comments:

Advantages:

1. No lethal fragmentation is generated by the grenade.
2. The flash and bang are effective in distracting and disorienting a suspect.

Disadvantages:

1. Stun grenades require extensive training and detailed tactical planning prior to actual deployment.
2. They can cause serious injury or death.

Class of Weapon: Other Devices

Generic Name: Pressure Compliance Device (pain compliance device)

Brand Names: The ORCUTT Police Nunchaku (OPN)

Descriptive Information: The nunchaku has its origins in the Far East where it was both an offensive and a defensive weapon. The device offered by ORCUTT is intended to stop an attack by a suspect as well as to control a suspect's actions. It is not intended as an impact weapon. Two 12-inch polycarbonate sticks joined together by a 4-inch nylon cord give the tool a total length of 28 inches. It is the 4-inch gap between the two handles that is the key to the device's effectiveness. Once the nylon cord is wrapped around a wrist or an ankle, pressure is applied and the pain compliance effect is said to be enormous.[9]

Comments: ORCUTT promotional literature notes a sale of 1300 OPNs to the San Diego Police Department in 1991 in connection with a desire to control and arrest protesters.

Findings from the Four Sites: None of the agencies in the four sites is using Nunchakus.

Discontinued or Considered for Purchase? The Nunchaku does not appear on any list.

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9 Jamieson, p. 27.

Appendix B

IACP Use of Force Model Policy

Model Policy

	Effective Date **February 1, 1989**	*Number*
Subject **Use of Force**		
Reference **Deadly Force, Nondeadly Force, Firearms, Non-Lethal Weapons**		*Special Instructions*
Distribution	*Reevaluation Date* **January 31, 1990**	*No. Pages*

I. PURPOSE

The purpose of this policy is to provide police officers with guidelines on the use of deadly and nondeadly force.

II. POLICY

This department recognizes and respects the value and special integrity of each human life. In vesting police officers with the lawful authority to use force to protect the public welfare, a careful balancing of all human interests is required. Therefore, it is the policy of this department that police officers shall use only that force that is reasonably necessary to effectively bring an incident under control, while protecting the lives of the officer or another.

III. DEFINITIONS

A. *Deadly force:* Any use of force that is likely to cause death or serious bodily harm.

B. *Nondeadly force:* Any use of force other than that which is considered deadly force.

III. PROCEDURES

A. Parameters for use of deadly force:

1. Police officers are authorized to fire their weapons in order to:
   a. Protect the police officer or others from what is reasonably believed to be an immediate threat of death or serious bodily harm; or,
   b. Prevent the escape of a fleeing felon whom the officer has probable cause to believe will pose a significant threat to human life should escape occur.
2. Before using a firearm, police officers shall identify themselves and state their intent to shoot, where feasible.
3. A police officer may also discharge a weapon under the following circumstances:
   a. During range practice or competitive sporting events.
   b. To destroy an animal that represents a threat to public safety, or as a humanitarian measure where the animal is seriously injured.
4. Police officers shall adhere to the following restrictions when their weapon is exhibited:
   a. Except for maintenance or during training, police officers shall not draw or exhibit their firearm unless circumstances create reasonable cause to believe that it may be necessary to use the weapon in conformance with this policy.
   b. Warning shots are prohibited.
   c. Police officers shall not fire their weapons at or from a moving vehicle.
   d. Firearms shall not be discharged when it appears likely that an innocent person may be injured.

B. Parameters for use of nondeadly force:

1. Where deadly force is not authorized, officers should assess the incident in order to determine which nondeadly technique or weapon will best de-escalate the incident and bring it under control in a safe manner.
2. Police officers are authorized to use department-approved nondeadly force techniques and issued equipment for resolution of incidents, as follows:
   a. To protect themselves or another from physical harm; or
   b. To restrain or subdue a resistant individual; or

This Model Use of Force Policy was developed under the auspices of the Advisory Board of the IACP/BJA National Law Enforcement Policy Center. A Concepts and Issues paper discussing key decision points and controversial issues pertaining to Use of Force may be purchased for $5.25 plus $1.00 for postage and handling by sending your order to the IACP/BJA National Law Enforcement Policy Center, 1110 North Glebe Road, Suite 200, Arlington, VA 22201.

c. To bring an unlawful situation safely and effectively under control.

C. Training and qualifications:
   1. Deadly weapons:
      a. While on-and off-duty, police officers shall carry only weapons and ammunition authorized by and registered with the department.
      b. Authorized weapons are those with which the police officer has qualified and received departmental training on proper and safe usage, and that are registered and comply with departmental specifications.
      c. The police department shall schedule regular training and qualification sessions for duty, off-duty and specialized weapons, which will be graded on a pass/fail basis.
      d. Police officers who fail to receive a passing score with their duty weapon(s) in accordance with department testing procedures shall be relieved of their police powers and immediately reassigned to nonenforcement duties.
      e. A police officer shall not be permitted to carry any weapon with which he has not been able to qualify during the most recent qualification period.
      f. A police officer who has taken extended leave or suffered an illness or injury that could affect his use of firearms ability will be required to requalify before returning to enforcement duties.
   2. Nondeadly force weapons and methods:
      a. A police officer is not permitted to use a nondeadly weapon unless qualified in its proficient use as determined by training procedures.
      b. The following nondeadly weapons are authorized: _____
      (Department should insert its own list here.)

D. Reporting uses of force:
   1. A written report prepared according to departmental procedures will be required in the following situations:
      a. When a firearm is discharged outside of the firing range.
      b. When a use of force results in death or injury.
      c. When a nonlethal weapon is used on a person.
   2. A supervisor will be immediately summoned to the scene and will comply with investigative procedures as required by the department in the following situations:
      a. When a firearm is discharged outside of the firing range.
      b. When a use of force results in death or serious injury.
      c. When a subject complains that an injury has been inflicted.

E. Departmental response:
   1. Deadly force incident
      a. Where a police officer's use of force causes death, the officer shall be placed on administrative leave after completing all internal investigative requirements, and until it is determined by a mental health professional that the police officer is ready to return to duty.
      b. The department shall conduct both an administrative and criminal investigation of the incident.
   2. Administrative review of critical incidents:
      a. All reported uses of force will be reviewed by the appropriate departmental authority to determine whether:
         (1) Departmental rules, policy or procedures were violated;
         (2) The relevant policy was clearly understandable and effective to cover the situation;
         (3) Department training is currently adequate.
      b. All findings of policy violations or training inadequacies shall be reported to the appropriate unit for resolution and/or discipline.
      c. All use of force incident reports shall be retained as required by state law.
      d. There will be a regular review of use of force incidents by the appropriate departmental authority to ascertain training and policy needs.
      e. An annual summary report of use of force incidents will be published and made available to the public.

WARNING

This directive is for departmental use only and does not apply in any criminal or civil proceeding. The department policy should not be construed as a creation of higher legal standard of safety or care in an evidentiary sense with respect to third party claims. Violations of this directive will only form the basis for departmental administrative sanctions.

By order of:

_____

Signature of Chief of Police

The IACP Model Use of Force Policy is intended to serve as a guide for the law enforcement executive who is interested in formulating a written procedure to govern use of force in his department. The law enforcement executive is advised to refer to all federal, state and municipal statutes, ordinances, regulations, and judicial and administrative decisions to ensure that the policy he seeks to implement meets the unique needs of the jurisdiction.