Attachment B: Less-Than-Lethal Use of Force Options Matrix

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
Options Already in Use				
Voice Commands	Verbal instructions issued by police officers.	Yes	N/A	The giving of voice commands is the lowest level of response available to officers when confronting violent persons or circumstances. Voice commands only work when they can be heard and when the receiver chooses to comply. Since voice commands encompass all aspects of law enforcement interpersonal communication and are an integral part of verbal de-escalation, they are the most used tool on this matrix. For example, asking someone to sit down or put their hands behind their back to be handcuffed is considered voice commands.
Physical Contact/Control Holds/Takedowns	Pushes, pulls, grabs, trained and untrained takedowns, body pressure, physical restraint, control holds and body weapons (e.g., punches, kicks, knees, elbows, etc.)	Yes	N/A	Physical control holds, takedowns, body pressure, and body weapons are the lowest level of force application for use when the level of crime, threat posed by the suspect, and level of resistance does not justify intermediate or deadly force.* Also used in sudden unexpected attacks at close range when other force tools are not immediately available. *Intentional strikes to the head are not included in this category and require an elevated level of force justification

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Baton	Straight wood baton or collapsible metal baton. Used for direct impact self-defense. Requires close proximity to suspect.	Yes	N/A	This is a time-tested and proven tool. It is low cost, highly versatile, and the primary option other than hands and feet for close contact defense. Batons are also used to enforce compliance from an uncooperative suspect. The standard patrol carry baton is a 26-29" wood or metal collapsible design. There is no effective difference in the use. It is the officers' preference which one they carry. The 42" baton is used for crowd control, as its length provides for greater reach in crowd management. The 42" length is not practical for regular patrol use. There is no legal difference in the use of the different length batons. All fall under the category of impact weapons. Target areas vary depending on the seriousness of the offence, threat posed by the subject, and level of resistance. Generally, officers are trained to target the arms and legs and to avoid the head, neck, spine, and groin, unless objectively reasonable based on the totality of circumstances.
OC/Pepper Spray	Oleoresin capsicum spray (OC spray) is an aerosol-based compound that irritates the eyes to cause a burning sensation, pain, and visual impairment.	Yes (however, the Department is currently transitioning from use of OC Spray to Pepper Gel)	N/A	OC spray is the least intrusive intermediate force tool (intermediate force is all force in between hands/body weapons and deadly force). It is an irritant that has a low probability of causing long lasting injury. Aerosol OC requires close proximity to the suspect in order for it to be effective, within 10-12ft. All impairment and pain is temporary. It may not work on suspects who are non-responsive to pain due to mental illness and/or substance intoxication. The aerosol nature of the spray creates a wide dispersal pattern that can cause cross contamination that effects arresting officers. The Department is currently in the process of exchanging fielded inventory of aerosol OC spray for Pepper Gel. The reasons for this transition are discussed under the Pepper Gel entry in this matrix.
OC/Pepper Gel	A variation of OC spray. Compound is gel based so it does not aerosolize, thus minimizing cross contamination. It contains a higher amount of capsaicin than traditional OC spray.	Yes Adopted on 10/30/2020	N/A	OC Pepper Gel has the same applications and benefits as aerosol OC spray. However, Pepper Gel has the added benefit of an increased effective range, within 18ft, and a narrow dispersal pattern that limits cross contamination. Pepper gel also has a greater concentration of Capsicum, which causes an increased burning sensation. The Department is currently in the process of exchanging the field inventory of aerosol OC spray for Pepper Gel, due to the increased performance.

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Taser X26p	Designed in 2003, Tasers are a conducted energy device, which uses "shaped pulse technology". Device fires two darts, one straight and one at 8 degree angle. The probe impact distance will vary depending on the distance between the ECD and the target, type of cartridge, etc. Both probes must impact. Fixed distance, single shot device.	Yes	N/A	The Police Executive Research Forum (PERF) cited dramatic reductions in arrestee and officer injuries with the deployment of a Taser. In one study, 24,000 instances of Taser use were analyzed amongst multiple agencies nationwide revealing a reduction of arrestee serious injury or death in 40-60 percent of the cases. Likewise, the rate of officer injury was reduced by over 70 percent. The use of a Taser has proven to be an effective medium range tool that has been used to incapacitate armed and combative subjects. The Taser is the ONLY less lethal tool that causes involuntary incapacitation and its use is a key component in the Department's de-escalation strategy. The SJPD X26p units are equipped with a 25ft cartridge for maximum effective range. However, the reduced dart angle necessary to achieve that range causes decreased performance in close proximity encounters. The darts must have a greater than one foot spread in order to achieve neuro muscular incapacitation. Current Taser X26p inventory is at the end of its projected lifespan and not under warranty. On December 1, 2020, Council approved the purchase of the Taser 7 to replace the technologically inferior X26p.
Taser 7	A newer, upgraded version of the Taser X26p.	50 Units currently in field testing	Approved by Council 12/1/2020	The Taser 7 brings the advantages of the X26p model, described above, while also offering a number of technological improvements. This new device provides two shot, multi distance capability and increased pulse rate, reducing the 50% failure rate seen in the X26p. The replacement of the X26p by the Taser7 will soon begin. With current Training Unit staffing and facility limitations, it will take approximately 6 months to 1 one year to complete a Department-wide transition. The Taser 7 requires an 8-hour basic update and transition course.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
Stunbag	Remington 870 pump action shotgun, modified to be used as a Less Lethal Impact Munition Launcher. Fires the Super-Sock® which is an aerodynamic projectile filled with lead or silica shot. Effect range is 15-75ft. Can cause significant injury at distances closer than 15ft.	Yes	N/A	The Stunbag shotgun is carried in every patrol vehicle and is therefore accessible to every patrol officer. The Stunbag provides an intermediate force option at ranges greater than OC spray or Taser. It is also used when other less-than-lethal use of force options fail. The Stunbag is a is key component of the Department's de-escalation strategy; our strategy emphasizes the use of distance to create a reactionary gap for the deployment of less lethal munitions, thus reducing the threat posed to officers by the suspect carrying a weapon other than a firearm. Target areas are determined by various factors including, but not limited to, threat posed by the suspect, level of resistance, availability of a target area, movement of a suspect, and necessity for immediate incapacitation. Absent extreme circumstances, the head, neck, spine, and groin should not be targeted. Using the same model gun for the Stunbag as the currently issued lethal shotgun allows the Department to minimize training and maintenance costs; officers train semiannually on the weapon system during range qualifications. Every officer on Patrol is currently required to carry the Stunbag shotgun in their patrol car. The Super-Sock round can present a risk of penetration at contact distances less than 15 feet, limiting its application in residential settings.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
Canine	Dogs bred for specific characteristics, selected as puppies for temperament and trained in obedience. Paired with a Trained Handler the Canine is used to conduct specialized tasks including narcotics & explosives detection and suspect apprehension.	Yes	N/A	Police service dogs have been in widespread use amongst American and international law enforcement agencies for over 100 years. The dogs go through a rigorous selection and initial training process to determine their suitability for law enforcement. After they are selected, the dogs are placed with a Canine Unit Officer and the pair are trained together on their specific law enforcement tasks. Dogs assigned to the Canine unit are primarily used for suspect searching and apprehension, but can be cross trained in narcotics and gun detection along with tracking. A Police Service Dog may be used to search for or apprehend a suspect when a suspect poses an immediate threat of violence, is actively resisting or believed to be hiding and the use of the dog would reduce the threat of violence (DM L2623). Dogs assigned to the Airport are trained specifically for explosives detection and are not used for apprehensions. There are currently 9 Canine Unit dogs, 4 airport bomb dogs, 1 CRU apprehension dog, and 1 ICAC electronic media search dog. The Canine Unit has more non-bite apprehensions than bite apprehensions. On average only 10-15% of all canine deployments result in a bite. Often subjects surrender upon hearing the canine warning announcement. When used for searching, the dog limits the likelihood of a sudden and violent contact with a hiding suspect, which increases officer safety and reduces the possibility of a lethal shooting. In 2007, the Department removed the Service Dog-Crowd Control section from the Duty Manual, thereby prohibiting the use of service dogs for crowd control purposes.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
WRAP Restraint Device	The WRAP is a safe restraint system, designed to protect subjects, officers by reducing the possibility of injury and death to combative suspects.	Yes	N/A	The WRAP was adopted by the Department approximately 20 years ago to be used on suspects that remained combative after being handcuffed and physically restrained. The device is designed to limit the risk of positional asphyxia inherent in previously common restraint methods such as the hobble (i.e., hog tie). When applied correctly, the device constrains the suspect's legs, preventing kicking and mechanically forces them into a sitting position. WRAP devices are carried in a duffle bag by patrol sergeants and applied under supervision on exceptionally combative suspects. The WRAP is a restraint device similar to handcuffs and not a force application tool. The WRAP requires multiple officers to assemble and apply on a combative suspect.
40 mm Direct Impact	Single-shot large bore launchers designed to fire a large range of munitions. The launchers are simple, durable and low maintenance.	Yes	N/A	Selected patrol officers and all specialized units have the 40mm. The 40mm is a different weapon system that is not covered during basic Academy training and requires additional specialized range training. Patrol 40mm launchers are supplied with the foam baton round, which is effective within 5-75+ feet. The large surface area of the round limits risk of penetration. The 40mm Direct Impact round is more versatile than the Stunbag Super-Sock with a safe minimum contact range of 5 feet and in extreme circumstances point blank. The 40mm weapon is in common usage in law enforcement throughout the U.S. Highly versatile, it can be used to push open doors from distance, break windows, etc. Like the Stunbag, the 40mm is a is key component of the Department's de-escalation strategy; our strategy emphasizes the use of distance to create a reactionary gap for the deployment of less lethal munitions, thus reducing the threat posed to officers by the suspect carrying a weapon other than a firearm. Target areas are determined by various factors including but not limited to, threat posed by the suspect, level of resistance, availability of a target area, movement of a suspect, and necessity for immediate incapacitation. Absent extreme circumstances, the head, neck, spine and groin should not be targeted.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
40mm OC/Pepper	Spin-stabilized 40mm projectile that deliver multi-effects of blunt force and dispersal of marking OC powder on and around the target.	Yes	N/A	The round utilizes a proven and reliable weapon with minimal need for additional training. It is a useful option as It provides targeted delivery of OC powder at distance, while limiting risks of cross contamination. Use was expanded to all specialized units on May 22, 2020 in Duty Manual L2609 Revision. The OC round provides two types of intermediate force simultaneously. This force option is useful to make resistant or barricaded suspects voluntarily exit vehicles, or in confined spaces, from a safe distance.
A0mm Marking Round	Marking round for use in 40mm Launcher. Can be used to identify persons in riotous crowds for delayed apprehension, by marking them with a colored liquid.	Yes	N/A	The 40mm marking round is used to identify specific suspects in crowd situations where delayed apprehension is appropriate to avoid agitating a crowd. The marking round can also be used on inanimate objects to identify locations for the deployment of chemical munitions. The marking round is in the inventory of specialized units.
40mm Maloderant	Malodorant 40mm less-lethal round, which contains a highly noxious payload that marks the subject with an extremely repulsive odor. Non-irritant can also be used for area denial.	Yes	N/A	Currently in MERGE Inventory. The malodorant round can be used against specific agitators or leaders in a riotous crowd. The noxious smell created by the payload makes the agitator undesirable to their compatriots reducing their effectiveness. The round can also be used for area denial to prevent a crowd from gathering in a specific location such as in intersection. MERGE holds and utilizes all specialty munitions due to their extensive training and experience in the deployment of chemical and experimental munitions.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
	The 37mm launcher is a single bore less lethal launcher. The weapon was used exclusively for crowd control with the CTS 3555 Multi Foam Baton impact munition.			The 37mm launcher was adopted solely for crowd control use on February 3, 2017, (Dept. Memo 2017-004) as an alternative to physical force when a crowd is engaging in assaultive resistance and property damage. The 37mm has the same characteristics and capabilities as the 40mm launcher apart from the barrel diameter and the use of black powder munitions. The black powder munitions have a loud report, bright muzzle flash, and smoke when discharged. It was intended to enhance effectiveness by causing a visual and auditory deterrent. The 37mm only used the CTS 3555 munition.
SS & ST.			No	CTS 3555 Multi Foam Baton munition is a crowd dispersal impact munition. The munition discharges 5 closed cell neoprene foam projectiles to affect a general area. The shot pattern increases over distance. This munition is often aimed at the ground 3-10 ft in front of a crowd to attenuate some of the blunt force trauma risks and to reduce the possibility of impacting above the belt line.
37mm Multi Foam Baton Crowd Dispersal Munition				The 37mm was not used until the events of June 2020, and once deployed did not prove to have the deterrence and dispersal effect that was expected. In June 2020, the Duty Manual was amended to prohibit the use of the 37mm for crowd control and crowd dispersal. The Duty Manual still provides for limited use of this device in circumstances where a person is actively attacking an officer or another person, or when an armed person poses a threat to officers or other persons.

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OC Vapor	Essentially a large OC canister. Utilizes the same compound as Officers' individual OC spray. Designed to disperse OC over a larger area for crowd dispersal.	Yes (Limited)	N/A	Currently in the inventory of Special Operations Units. Limitations include a very high risk of cross contamination and reduced effectiveness if prepared rioters employ countermeasures. It also requires close proximity to rioters to be effective. The OC Vapor cannisters are large and limited to crowd situations where close proximity wide-spread chemical agent dispersal is authorized.
Instantaneous Blast Aerosol OC	Hand thrown "grenade" that delivers a high concentration of Oleoresin Capsicum (OC) in a powerful mist.	Yes	N/A	Currently in the inventory of Special Operations Units. This device is well suited for affecting numerous subjects grouped together. The instantaneous blast OC is hand thrown and can distribute OC at greater distance than the aerosolized or gel OC. The canister is light weight and less likely to cause impact injuries. It can also be used to dislodge suspects barricaded in confined spaces.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
LRAD	The Long Range Acoustic Device (LRAD) is an acoustic hailing device, sound cannon, and sonic weapon. As a hailing device, it can be used to communicate or negotiate at a distance. As a sound cannon, it can be used to control crowds with unpleasant, high-decibel noise. Device is large and typically mounted on a vehicle or tripod.	Yes (In acoustic hailing mode) No (In sound cannon mode.)	N/A	MERGE uses the LRAD for hailing and negotiations at a distance. This device has "militarized" associations. The NYPD's use of the LRAD is being challenged in federal court, as the "sound cannon" mode creates a high potential for inadvertent hearing damage for anyone that walks in front of the device at close range.
SPEDE-HEAT CS CS Gas	CS "Grenade" is a high volume, continuous burn that expels CS gas in approximately 20-40 seconds. The payload is discharged through four gas ports on top of the canister, three on the side and one on the bottom. This is a launchable grenade issuing a 12-gauge shotgun launcher.	Yes	N/A	Exposure causes a burning sensation and tearing of the eyes, a burning irritation of the mucous membranes of the nose, mouth and throat, causing coughing, nasal mucus discharge, disorientation, difficulty breathing, and a psychological perception of suffocation partially incapacitating the subject. Effects diminish when subjects leave the gas area. For those reasons, it is more effective than OC. CS is most often used on barricaded subjects and is the last best tool to force a violent barricaded subject to voluntarily exit a location. When used on barricaded suspects, CS gas is an effective de-escalation tool, limiting the likelihood of a violent confrontation resulting from utilizing a manual search and extraction with officers or a K-9. CS is also an effective crowd dispersal tool when authorized. If necessary, cannisters can be ballistically launched from a safe distance.

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OC Blast Grenade	The Han-Ball™ OC "Grenade" is a fast burning, high volume continuous discharge grenade. It produces a loud sound similar to a Flash Bang as it disperses OC powder.	Yes	N/A	Currently in Special Operations inventory. It is useful for crowd dispersal, as a hand thrown or launchable device. It is also useful to dislodge hidden or barricaded suspects. It is a pyrotechnic device and carries some risk of injury to persons immediately in contact at the point of deflagration.
CS Blast Grenade	Grenade holds approximately 1.6 oz. of active CS agent which is expelled through three ports around the equator of the ball.	Yes	N/A	Currently in MERGE Inventory. Due the intense heat generated by this grenade, it should not be used inside a building or near flammable material. Can cause burns if picked up. This device is the same as the Han-ball OC except that it contains CS gas, which is a more potent irritant than OC. It can be used to break up large violent crowds when other less intrusive methods have failed. CS is a chemical munition requiring extensive and ongoing specialized training. As a result, it can only be used by MERGE personnel due to their increased level of training with chemical munitions.
Stinger CS Ball Grenade	The Stinger® CS Rubber Ball Grenade is a maximum effect device that delivers four stimuli for psychological and physiological effects: rubber pellets, light, sound, and CS agent. Widely used as a crowd management tool by Law Enforcement and Corrections.	Yes	N/A	Currently in MERGE Inventory. The Stinger CS Ball Grenade is similar to the Han-Ball CS grenade above, but also has small rubber ball projectiles that are dispersed with a loud pyrotechnic blast. The effect of the blast, coupled with the impact of the projectiles and irritant effect of the powdered CS, is highly distracting and incapacitating. The device can be used to gain a momentary advantage on a suspect waiting in ambush for officers. The device can reduce the likelihood of a violent encounter. It can also be used to break up large violent crowds when other less intrusive methods have failed.

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Noise Flash Distraction Device	"Flashbang" It produces 175 dB of sound output at 5 feet and 6-8 million candelas for 10 milliseconds. It is a less-lethal explosive device used to temporarily disorient the senses and cause blinding for approximately 5 sec.	Yes	N/A	Currently in Special Operations inventory. It has proven highly effective at reducing confrontations with violent and armed suspects. It can cause hearing damage in closed confined spaces and carries pyrotechnic burning risks.
Options Under Consideration				
Bola Wrap	BolaWrap® is a hand-held remote restraint device that discharges an 8-foot bola style Kevlar® tether at 513 feet per second to wrap a subject's legs or arms at an effective range of 10-25 feet. In order to be effective, the suspect needs to be standing relatively still, arms and legs close together with 8ft of clearance.	No Tested via Less-Than- Lethal Use of Force Options RFI	A field-testing project began in January 2020. It was postponed due to initial analysis that product was ineffective in real world application. Field-test could be revisited if performance improvements are made or it is re-prioritized by the Department.	The BolaWrap is designed to be used on relatively stationary non-compliant subjects. The device uses a pyrotechnic charge to fire two barbed metal probes connected by a Kevlar cord. The probes spread to a width of 8 feet and upon contact wrap around the body of a subject. The device is designed to wrap and hold the arms or legs. However, the device is not capable of pulling the arms or legs together if they are separated at the time of contact. When deployed on a subject walking at an average stride length, there will be sufficient slack upon impact to allow the subject to step out of the restraint. A similar effect will happen if the arms are away from the torso at the time of contact. Training Unit conducted testing in a controlled environment as part of a RFI. LAPD has fielded some of the devices and reported mixed results. The device had limited application on suspects in a real-world environment. The device is not ideal for individuals who are moving, in a corner, within 8' of other objects, or in a crowd.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
Poly Carbonate Shields	Poly Carbonate Shield for use in situations involving subjects who are known to not be armed with a gun and those who are in crisis. Does require close contact with violent suspects.	No	To be determined, Department is currently conducting initial research	The Training Unit is in early discussions and research on the overall effectiveness of shields for standard patrol field use in situations involving single unarmed subjects in crisis. Shields have the potential to be useful to allow officers to approach unarmed violent suspects and effectively pin them to a fixed object or down on the ground. If the Training unit determines that the shield is a viable tool with sufficiently wide application, they will begin a RFI process. Through the RFI process, the Training Unit will field a group of shields to determine the real-world effectiveness, the necessary distribution numbers and training needs for a full purchase and deployment. In a crowd control environment, the shields can cause a line of officers to become a wall for rioters to push against. Having one hand occupied with the shield can cause officers to use one handed overhead baton swings, increasing likelihood of head impacts. The shield in crowd control situations limits officer effectiveness when the shield is not immediately needed and restricts movement. The shield does not fit in with the current countywide Mobile Field Force training model. We are not considering it for crowd control.
Options Not Under Consideration				
Pepperball Gun	A modified Paintball gun that fires a frangible projectile containing a powdered chemical that irritates the eyes and nose in a manner similar to pepper spray.	No	No	The Pepperball gun is designed to be used on non-compliant and resistive subjects as an intermediate force option, similar to the Stunbag or 40mm, when objectively reasonable based on the totality of circumstances including the seriousness of the crime, threat posed by the subject, and level of resistance. Not adopted in favor of expansion of the 40mm projectile inventory to include OC. Its limitations include decreased velocity as CO2 canister empties, causing variations in accuracy and impact effect, potential for hardening of Pepperballs over time, and requirement for a CO2 canister to operate the device and for bulk CO2 tanks for refilling.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
FN 303	A shoulder fired less lethal launcher that is capable of firing a variety of .68 cal projectiles including impact, paint, markers and Pava/OC powder. Fires weighted plastic rounds.	No Tested via Less-Than- Lethal RFI	No	The FN303 is designed to be used on non-compliant and resistive subjects as an intermediate force option, similar to the Stunbag or 40mm, when objectively reasonable based on the totality of circumstances including the seriousness of the crime, threat posed by the subject, and level of resistance. Not adopted in favor of expansion of 40mm projectile inventory. In 2004, Boston PD fired the FN303 at a woman. The projectile penetrated her skull and the plastic projectile fragmented into pieces, resulting in her death. Further testing revealed that the CO2 canister had unreliable pressure over multiple rounds. Other drawbacks include the requirement for constant maintenance and testing of CO2 canisters, the need for CO2 bulk refilling stations, and specialty maintenance training.
AWASP	Essentially a portable safer LRAD, can be slung over the shoulder to broadcast targeted powerful verbal messages or instructions which are crystal clear even at very significant distances. If required, it can emit a very narrow beam of intense but safe sound.	No	No	The device has value as a portable hailing/PA device when giving directions to individual or crowds. Per the product website, "A-WASP is not a weapon, it is not a less-lethal weapon, and it is not a pain compliance device." Sound effect defeatable by plugging ears. This device does not provide a significant capability increase over already available loud hailing devices and aerial announcements made by Air3.

Less-Than-Lethal Use of Force Options	Description	Do We Use It Now	Are We Considering Using It	Analysis
Net Gun	Net gun is a non-lethal weapon designed to fire a net which entangles the target. Net guns have a long history of being used to capture wildlife, for research purposes.	No	No	The net gun was designed for use on animals, for capture and tagging for research purposes. There has been exploratory marketing as a less lethal apprehension device to be used on non-compliant and resistive subjects. The net does not incapacitate a subject or restrict movement of the arms, legs, and hands. As of 2019, only 50 law enforcement departments worldwide were using a net gun. Currently, net guns have extremely limited effectiveness on people. An armed suspect still has ability to access weapons. The net gun has more limitations than the Bola.