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1	C. D. Michel - S.B.N. 144258 Clinton B. Monfort - S.B.N. 255609				
2	Sean A. Brady - S.B.N. 262007 Anna M. Barvir - S.B.N. 268728 MICHEL & ASSOCIATES, P.C. 180 E. Ocean Boulevard, Suite 200				
3					
4	Long Beach, CA 90802 Telephone: (562) 216-4444				
5	Facsimile: (562) 216-4445 Email: cmichel@michellawyers.com				
6					
7	Attorneys for Plaintiffs				
8	IN THE UNITED STATES DISTRICT COURT				
9	NORTHERN DISTRICT OF CALIFORNIA				
10	SAN FRANCISCO DIVISION				
11	SAN FRANCISCO VETERAN POLICE )	CASE NO:	13-CV-13-5351 WHA		
12	OFFICERS ASSOCIATION, LARRY ) BARSETTI, RAINERIO GRANADOS. )	SUPPLEM	ENTAL DECLARATION OF		
13	ARTHUR RITCHIE, and RANDALL LOW,)	GARY KLI PLAINTIF	ECK IN SUPPORT OF FS' REPLY TO		
14	Plaintiffs,	DEFENDA PLAINTIF	NTS' OPPOSITION TO FS' MOTION FOR		
15	v. )	PRELIMIN	ARY INJUNCTION		
16	THE CITY AND COUNTY OF SAN () FRANCISCO, THE MAYOR OF SAN ()	Date:	February 11, 2014		
17	FRANCISCO, EDWIN LEE in his official ) capacity. THE CHIEF OF THE SAN	Time: Location:	10:00 A.M. San Francisco Courthouse		
18	FRANCISCO POLICE DEPARTMENT, ) GREG SUHR, in his official capacity, and )		Courtroom 8 - 19 <sup>th</sup> Floor San Francisco, CA 94102		
19	DOES 1-10, )				
20	Defendants.				
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### **DECLARATION OF GARY KLECK**

1. This response concerns the portions of San Francisco's ("SF") Opposition brief that pertain to my Declaration and my prior research. Citations to SF refer to the page and line(s), according to internal pagination, where the relevant text occurs. E.g., the first line of SF's section titled Statement of Facts would be cited as 1/18, denoting p. 1, line 18.

2. 1/5. SF claims that large-capacity magazines (LCMs) are "almost never" used for self-defense, without specifying what "almost never" means. Since there are probably at least 1 million defensive gun uses (DGUs) per year (Kleck and Kates 2001, Chapter 6), even if just one in a thousand DGUs involved LCM use, this would be 1,000 defensive uses of LCMs per year. And if SF asserted that it is reasonable to describe this many defensive uses of LCMs as "almost never," the exact same characterization would apply at least as strongly to the number of times LCMs were used in mass shootings and were likely to have affected the number of victims hurt in those incidents.

3. The truth is, no one knows how many times LCMs are used defensively. SF's expert witness analyses of the DGUs selected by the NRA for inclusion in the <u>American Rifleman</u> "Armed Citizen" column are not representative of the full set of DGUs, and can tell us nothing about the share of DGUs that involve use of LCMs. And even if they were representative, the sample was far too small to reliably estimate the prevalence of any attribute that occurred in less than 1% of DGUs.

4. 5/25-27. It's probably a minor point, but SF subtly mischaracterizes my DGU estimates, claiming that we estimated that there were 2.5 million DGUs "each year." This is misleading. The survey that generated that estimate was conducted in early 1993, and the strongest estimates generated by the survey pertained to the previous 12 months. Thus, the 2.5 million estimate pertained to a specific single year, 1992, which was a peak crime year, and also likely to be a peak year for defensive uses of firearms by crime victims. In more recent years, with lower crime rates, the annual number of DGUs would likely be smaller.

5. 5/23 to 6/11. Every single one of the criticisms of the Kleck-Gertz estimates of DGU frequency

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cited by SF, as well as all other published criticisms, have been thoroughly rebutted for years – a handy source compiling all of the rebuttals into one place is Chapter 6 of the 2001 book <u>Armed</u> (Kleck and Kates 2001). *None of the experts or sources cited by SF have refuted a single one of these rebuttals.* 

6. More specifically, every single claim made by David Hemenway and cited by SF was false. For example, our survey did <u>not</u> "show 132,000 perpetrators killed or wounded by defenders each year," and thus there could not be any conflict between our survey results and hospital data on numbers killed or injured. We had too few DGU sample incidents (n=213, unweighted) to reliably estimate the share that resulted in wounded offenders, so our survey did not imply any particular number of "perpetrators killed or wounded by defenders each year," and it was therefore impossible to show any contradiction between our estimates and hospital data.

7. Likewise, our survey did <u>not</u> show that "more guns are wielded to defend against rapes each year than there are actual rapes or attempted rapes each year," for the simple and indisputable reason that we do not know the actual number of such crimes that occur each year (among many other problems with Hemenway's claim). It is universally understood among criminologists that neither the National Crime Victims Survey ("NCVS") nor any other source can tell us the total number of sexual assaults or any other crime. Hemenway also compared data on the wrong universe of sexual assaults, citing figures that pertained to a smaller, noncomparable, subset of these crimes (Kleck and Kates 2001, Chapter 6).

8. In sum, there is no scholarly foundation for the claim that the Kleck-Gertz or other survey-based estimates of DGU frequency are too high. Quite the contrary, the overwhelming weight of scholarly evidence favors the proposition that surveys are more likely to *under*estimate the frequency of this sort of crime-related experience than to overestimate it. To report a DGU in a survey requires that the respondent who has had such an experience be willing to report (1) a victimization experience (otherwise there can be no defensive reaction to a crime), (2) their possession of a gun (otherwise the defensive action could not be classified as a defensive use of a gun), and (3) (usually) the crime of unlawful possession of a firearm in a public place (since most DGUs occur in public places where, in 1993, it was unlawful for all but a tiny

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percent of the population to possess a gun). The scientific literature on survey response errors *uniformly* indicates that survey respondents in the general adult population on net <u>underreport</u> (1) crime victimizations, (2) gun possession, and (3) unlawful behaviors by the respondent. Consequently, estimates of DGU frequency are far more likely to be too low than too high (see Kleck and Kates 2001, Chapter 6 for supporting citations).

9. Most outrageously of all, SF quotes a claim from David Hemenway that "all attempts at external validation [have] reveal[ed] it to be a huge overestimate," when in fact every attempt at external validation has *confirmed* our estimates of DGU frequency. Our survey figures were not only completely consistent with hospital data on numbers of persons medically treated for gunshot wounds, and estimates of the frequency of sexual assaults and other crimes, but have also been consistently confirmed by the results of other professionally conducted national surveys of representative samples of the U.S. adult population. By 2001 there were at least 20 such surveys that *all* indicated huge numbers of DGUs each year, exceeding the number of crimes in which offenders used guns (Kleck and Kates 2001, Chapter 6).

10. 6/13-21. SF characterizes my descriptions of typical mass shootings as "deeply misleading," due to the way I addressed missing data. I would say instead that my phrasing of some of my findings was not sufficiently precise. Instead of saying that "no LCM was used in ... 35 incidents," I should have stated that "no LCM was *known to have been* used in 35 incidents." My underlying assumption was that if an LCM had in fact been used in a mass shooting, that at least one available news account would have reported this fact, especially in light of the editorial policies of so many news outlets favoring bans on LCMs. It seems unlikely that not a single such news outlet would take advantage of a mass shooting in which an LCM had actually been used to report this fact to its audience. Further, I also made use of the compilations of LCM-involved mass shootings by advocates of LCM bans like the Violence Policy Center, Mayors Against Illegal Guns, and Mother Jones magazine, for reports of LCM use in mass shootings, on the assumption that these organizations were well-motivated to search for any evidence of such LCM use. If LCM use had been reported in any news story, even one that my assistants and I missed, it was likely that the staff of -4-

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these organizations would have located at least one of these news stories. Thus, I stand by the position that most mass shootings did not involve LCMs, and that, to phrase it very precisely, *there is no affirmative evidence* that LCMs were used in 35 of the 57 mass shootings that I studied.

11. 6/22-28. SF criticizes me for concluding that LCM use does not affect rates of fire in mass shootings because some shooters were not shooting continuously. My conclusion did not rely in any way on an assumption that any shooters fired continuously, or that a constant rate of fire was maintained. My data pertained to *average* rates of fire throughout the period of firing, and I assume as a matter of course that rates of fire during any given brief segment of time within those periods were sometimes higher than average and at other times lower than average – including periods when there was no firing at all. This, however, has no bearing on whether any mass shooters have ever needed to fire any more rapidly than these average rates in order to harm as many victims as they did, which is the relevant question. The policy-relevant fact is that all mass shooters for whom we had the relevant information regarding rates of fire had ample time to fire as many rounds as they did, even if they had needed to take a few more seconds to change magazines. Whether the shooters fired faster during some subperiods than they averaged over the whole shooting period is irrelevant.

12. SF brings up a red herring in this connection – stating that the rates of fire that I reported do not approximate how fast a mass shooter with an LCM "*can* fire" (7/4, emphasis added). The theoretical upper limit rate of fire that such a shooter might hypothetically attain is completely irrelevant to the issue of how fast real-world mass shooters *actually* had to shoot in order to inflict all the injuries and deaths they inflicted, for the simple reason that no real mass shooter has ever come even remotely close to this maximum possible rate of fire. Eyewitnesses have repeatedly described mass shooters as firing deliberately and taking careful aim at specific individual victims, rather than firing as fast as they could. The high percentage of wounded victims who die (reaching 100% in some incidents) also supports the view that mass shooters shoot carefully, aiming for vital areas of the victim's body, rather than firing rapidly and inaccurately. In short, the rates of fire that mass shooters *could* sustain is irrelevant to the rate they actually

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do sustain, and it is only the latter that can affect the number of casualties actually inflicted.

13. SF mischaracterizes my positions on when LCMs are likely to affect the number of casualties, claiming that I asserted that this is true "*only* where the shooter possesses only one gun and only one LCM" (7/11-12). This is false, since I explicitly stated that LCM use also could affect the casualty count if there were bystanders willing to tackle the shooter when he was reloading. Under that circumstance, use of an LCM prior to the bystander intervention could affect the number of rounds fired, and thus the number of victims hurt before the magazine change (Kleck Declaration, 6/6-10). It is dubious that SF could have honestly misunderstood this point, since I made it quite clearly: "One circumstance in which use of an LCM could affect the number of casualties even if the shooter possessed multiple guns or multiple magazines is if there were bystanders willing to tackle the shooter during his attempt to change magazines or firearms, the use of an LCM prior to that time could affect the number of victims shot, since the killer could have fired more rounds before needing to reload or switch guns."

14. Consequently, it is especially outrageous for SF to claim that "[Kleck's] narrow criteria for when an LCM matters *exclude the single incident where he admits that a shooter was tackled while reloading*— that is, where actual events proved that magazine capacity mattered—because that shooter had three guns and three LCMs," (SF 7/23-25), a reference to the 1998 Springfield, Oregon shooting by Kip Kinkel. My criteria obviously did <u>not</u> exclude this incident, since I had carefully explained why LCM use might matter in certain rare circumstances even if the shooter possessed multiple guns or multiple magazines. Thus, SF misstated my position, creating a false impression of some contradiction or inconsistency in my work. I also noted, however, just how extremely rare this circumstance is in mass shooting incidents. It is known to have occurred just two or three times in the past 30 years.

15. SF also made a blatantly false claim about shootings I had supposedly missed, presumably for the sake of suggesting that my work was sloppy. SF cites two cases of single-gun shootings that SF alleged were mass shootings that I "missed" (7/16-20). These cases, occurring in 2013 in Hialeah, FL and Herkimer, NY were *not* mass shootings according to the definition I was using, and therefore did not

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belong in my dataset. The <u>Mother Jones</u> dataset on which SF relied, and the news stories the magazine cited as sources, indicated that both incidents involved six victims shot. I had clearly stated that my dataset encompassed shooting incidents in which *more* than six victims were shot, not including the shooter himself (Kleck Declaration 4/17). Their claims that these single-gun incidents belonged in my dataset were plainly wrong.

16. SF also suggests that I believed, or somehow relied on the belief, that "it is just as fast to switch guns or magazines as it is to keep shooting with the same magazine" (SF 7/21-22). This too is false, as I never stated, hinted at, or assumed any such thing. Instead, I made a more subtle and far more relevant observation about mass shootings: that the 2-4 seconds it takes to change detachable magazines on semi-automatic firearms does not slow the *actual* rates of fire maintained by actual mass shooters. It is true that a hypothetical shooter attempting to fire as fast as possible would take 2-4 seconds longer to switch magazines and resume firing than it would to keep shooting with the same magazine, but this is completely irrelevant to actual mass shootings that have occurred in the past or are likely to occur in the future, since actual mass shooters do *not* fire anywhere near as fast as they possibly can, and if they did, they would not fire nearly as accurately as they unfortunately do.

17. SF claims that there have been "many" instances in which bystanders tackled shooters, though they only cite *three* such cases occurring within the past thirty years (SF 8/1), two of which I had already acknowledged (the 1993 Long Island railroad incident and 1998 Oregon incident). Thus the reference to "many more" such cases is misleading both because three can scarcely be described as "many," and because the word "more" suggests that these are additional cases of which I had not taken account in my Declaration. The Tucson Gabrielle Giffords shooting is questionable in this regard because it is unclear from media accounts whether bystanders were able to subdue the shooter because (1) he was reloading (SF's position), or because (2) his magazine had failed due to a broken spring and he was unable to fire. Since such magazine defects would disrupt a mass shooter's firing regardless of whether the magazine's

capacity was large or small, interpretation (2) would not support the position that use of non-LCMs would
 have made a difference.

18. SF then pads out the list of supposedly supportive cases by citing the Sandy Hook shooting, even though bystanders did not tackle the shooter or otherwise intervene. SF switches in mid-paragraph to an entirely different argument as to why LCM use might affect casualty counts – that potential victims could escape "while the shooter was switching magazines." This is an especially deceptive passage, because SF switches from discussing facts to discussing evidence-free speculations, without informing the reader of this critical shift. Their full statement reads: "And law enforcement sources have stated that a half-dozen children *may* have been able to escape from Sandy Hook Elementary School while the shooter was switching magazines" (8/8-10, emphasis added). The text of the supporting *Hartford Courant* article cited by SF makes it clear that this was just a speculation by one or more unnamed law enforcement persons. Some children did indeed escape, and there was indeed a pause in the shooting, but *investigators could not establish either (1) that the children escaped during the pause, or (2) that the shooter was reloading during the pause* (see States Attorney Report).

19. Investigators also found multiple magazines that had cartridges still left in them, indicating that even when the shooter did change magazines, he not did so because he *had to*, because he had exhausted the magazines, but rather that he had *chosen* to change magazines even though he could have continued firing with the same magazine. The significance of this is that at the time the children were escaping, the shooter could have chosen to fire at them by simply continuing to fire the remaining rounds in the "old" magazine, rather than changing magazines "prematurely," as he repeatedly did. This means even *if* the children escaped during the pause (which is not known), and even *if* the pause was due to a magazine change (which is also not known), one could still not reliably conclude that the children escaped because the shooter had to change a magazine. In sum, there was no factual foundation whatsoever for the speculation that a need to reload saved any lives in the Sandy Hook incident.

20. The specific way in which SF supports this particular claim is instructive. SF claims that in the -8-

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Sandy Hook shooting "these officials [apparently referring to unnamed law enforcement personnel] attributed the children's escape either to the shooter's pause to reload or to a jammed rifle. But the rifle was later tested and functioned properly." (8/8-9). The clear intention of this remark was to suggest that the children's escape was due to the shooter having to reload, i.e. to change magazines. SF then cites p. 22 of the State's Attorney's report on the shooting. This citation is misleading because the Report supports only the minor point that the rifle was not jammed, but does not in any way support the claim that the children's escape was due to the shooter's pause to reload. On the other hand, if "these officials" merely refers to unnamed informants cited in the <u>Hartford Courant</u> article, the claim is even more misleading, since these individuals did not narrow down their explanations of the children's escape to just these two alternatives of reloading or jammed rifle. Indeed, the official report of the incident did not even establish that the children's escape occurred during the pause in firing, or if the pause occurred because the shooter had to reload (see State's Attorney's Report). Thus, SF actually offered nothing to support the claim that victims in mass shootings have escaped while the shooter was changing magazine.

21. SF claims to have identified an inconsistency between my Declaration in a New York case, and my Declaration in the SF case (8/17). There is no inconsistency. I wrote the New York Declaration in April of 2013 before I had conducted my study of mass shootings in the period 1994-July 2013. I stated at that time that I *knew of* just one mass shooting in which bystanders had intervened while the shooter was reloading – a Long Island incident that I had studied for a brief analysis of mass shootings published in my 1997 book, <u>Targeting Guns</u>, which covered only cases that occurred between 1984 and 1993. My statement in the NY Declaration was exactly correct – it was indeed the only such case that I knew of as of April 2013. I began my analysis of the 1994-2013 cases three months later, in July of 2013, at which point I discovered one, and possibly two, more such cases – the 1998 Springfield Oregon case and possibly the Tucson shooting in which Gabrielle Giffords was shot. Rather than this being an inconsistency, it is simply a reflection of the growth of my knowledge – I knew of one relevant case in April 2013, and learned of one or two more by July 2013. The addition of one or two more such cases, however, does not alter the

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extremely rare, as only two or three cases are known to have occurred in the past 30 years.

22. SF follows up this discussion with irrelevant reference to a set of 42 incidents "where shooters have been subdued while reloading" (8/15-16, citing the Van Aken Declaration). These 42 cases are irrelevant to the issue of whether LCM use affects the outcomes of mass shootings because these cases were *not* mass shootings and were radically different from mass shootings in crucial respects. Many of these incidents did not even involve semi-automatic firearms (e.g. the 2-shot shotgun used in the 3-2-93 incident or the revolver used in the 9-20-89 incident), in contrast to mass shooters, who nearly always use semi-automatic firearms (Kleck Declaration, pp. 13-36). Reloading semi-automatic firearms with detachable magazines is far faster than reloading other kinds of firearms, so bystanders have more time to subdue shooters using the latter types of guns. Further, most of Van Aken's incidents did not involve shooters who had either multiple guns or multiple magazines, even though *all* mass shooters for which we have the relevant information possessed one or the other. As a result, it was far less risky for bystanders to tackle the shooter during reloading in these 42 ordinary shootings than it is in mass shootings. Thus, the willingness of bystanders to intervene in the circumstances of these 42 incidents tells us nothing about how often they are willing to do so in the mass shooting incidents, and it is the latter kind of shooting that is relevant, since it is only shootings in which many rounds are fired by the offender where it is at least minimally plausible that LCM use might affect casualty accounts. The only conclusion that Van Aken's eclectic collection of shooting incidents supports is that bystanders are, *under some circumstances*, willing to tackle shooters while they reload.

23. The 42 cases, however, do not support SF's assertion that there are "many" such cases (8/14). News accounts of the incidents were evidently derived from a worldwide search, since some cases occurred in locations as far away as Australia (see the Melbourne case occurring on 12-8-87, Van Aken Declaration), and covered a period of at least 33 years, from 1981 (see the 5-7-81 case) through 2013. Thus, Van Aken was able to dig up only *about one-two supportive cases per year in the entire world*. Over

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the this period, tens of millions of violent crimes involving firearms were committed in the U.S. alone (e.g., there were over 10 million in the U.S. just in the period 1993-2011 – U.S. Bureau of Justice Statistics, "Firearm Violence, 1993-2011" [2013, p. 2]), so a figure of 40 out of tens of millions actually means that this sort of victim intervention is extraordinarily rare in gun crimes. I suspect few people would regard SF's use of the word "many" to describe the frequency of these events as informative or even honest. Indeed, the Van Aken materials actually support a position exactly contrary to that taken by SF – bystanders, even in relatively ordinary shootings, *virtually never* subdue shooters while they are attempting to reload.

24. SF irrelevantly notes that I offered no evidence to contradict the evidence that shootings with LCMs "result in more fatalities and more injuries than with standard-capacity magazines" (9/3-5). This is irrelevant to any of the claims I made in my Declaration for the simple reason that I never denied this simple statistical association, and therefore had no reason to offer any evidence contradicting it. I instead pointed out in the Declaration the undisputed fact that correlation is not causation, i.e. that this simple statistical association does not establish that LCM use *causes* a higher casualty count. Instead, all evidence known to me, including all evidence presented by SF, is completely consistent with the proposition that LCM has no causal effect of its own on body count, but rather is merely the result of some mass shooters' more lethal intentions, which are what actually cause higher casualty counts. Neither Dr. Koper nor Dr. Allen has offered *any* evidence, of any quality, that this association reflects a causal effect of LCM use on the number of people killed or injured in mass shootings, as distinct from it being a spurious association due to the fact that the lethality of mass shooters affects both the casualty count and the choice of weapons and magazines.

25. Unless LCM use actually *causes*, to some degree, the number of victims harmed in crime incidents, or specifically in mass shootings, there is no valid evidence supporting restrictions on LCMs, let alone banning possession by law-abiding individuals. The City offers no evidence, and I am not aware of any, that removing LCMs from the homes of the law-abiding will reduce crime or increase safety in any

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way. A mere statistical association between LCM use and casualty count is not sufficient to establish that one causes the other. SF correctly notes that the number of rounds fired and victims shot in mass shooting with LCMs is larger than the number in those without LCMs, but fails to note that this would be true *even if LCM use had no causal effect whatsoever on the harm done in these shootings*. This is so because the lethality of the shooter's intentions, i.e. the degree to which he intends to shoot many people, almost certainly affects both (1) the number of people he in fact ends up shooting, and (2) the choice to bring LCMs (along with more guns and more total rounds of ammunition) into the incident. Mass shootings are typically planned, and thought about by the shooter for a long time, offering plenty of time for offenders to make preparations such as acquiring guns, ammunition, and magazines.

26. If these premises are correct, the result would be a spurious (noncausal) association between LCM use and number of casualties. SF's experts do nothing to rule out or even mildly undercut this interpretation of the associations they cite. Even SF's expert, Franklin Zimring supports the premise that persons intending to shoot many people are likely to bring LCMs to the shooting, noting that "mass shooters think LCMs help increase the death toll from their attacks" (Zimring, Declaration of Franklin E. Zimring In Support of San Francisco's Opposition to Plaintiffs' Motion For Preliminary Injunction, p. 7, paragraph 19.) Even if this belief was mistaken, it would still be true that the desire to increase the death toll would cause an increased likelihood that an aggressor would acquire and bring LCMs to a shooting. 27. The claim that LCM use has an actual causal effect of its own on victim count in mass shootings would be more plausible if close analysis of the details of actual incidents indicated the LCM use was actually necessary to inflict as many injuries as were inflicted in LCM-involved mass shootings. This sort of analysis, however, indicates precisely the opposite. There are no mass shootings in which the details indicate that the shooter needed an LCM to inflict the amount of harm he inflicted. Instead, in all incidents where the relevant information was available, mass shooters had either multiple guns or multiple magazines, and thus could easily fire many rounds either without reloading or by quickly reloading a detachable magazine. The details likewise show that even if shooters had lower capacity magazines and

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had to reload slightly more often, this would not slow their rate of fire, since the killers in actual mass shooting average so low a rate of fire that the 2-4 seconds it takes to reload would be no longer a time period than the average interval between shots fired in mass shootings (Kleck Declaration).

28. SF states that the "Plaintiffs present no evidence whatsoever that such occurrences [apparently referring to DGUs with many rounds fired] are widespread" (9/15). It is hard to evaluate this statement since SF does not say what it means by "widespread." No one knows how common DGUs with many rounds fired are, but it is likely to be larger than the number of shootings in which LCMs affect the number of casualties simply because the latter quantity may well be as low as three in the past 30 years. It is true that I have written that "only a tiny fraction" of DGUs involve anyone being wounded, and I suspect that only a tiny fraction involve over 10 rounds being fired. The problem with this rather vague statement is that it matters a great deal just how tiny this fraction is, assuming that one is trying to assess the relative costs and benefits of an LCM ban. It is clear that the benefits are likely to be extremely limited, so DGUs in which large numbers of rounds had to be fired to prevent deaths or injuries would not have to be very "widespread" in order to outnumber the shooting incidents in which LCM use affected the number of casualties.

29. SF relies on the Expert Report of Lucy Allen to support their claim that few DGUs involve many rounds being fired. This report establishes no such thing. Allen analyzed a nonrandomly selected set of DGUs reported in the National Rifle Association magazine, <u>The American Rifleman</u> in its "Armed Citizen" column, and drew conclusions about the entire population of DGUs based solely on this analysis; specifically that it is "rare" (without specifying how rare) for a person to fire more than ten rounds when using a gun in self-defense incidents. Leaving aside the validity of this conclusion, neither the NRA nor Allen claims these incidents were chosen according to any acknowledged scientific random sampling procedure. There was no formal basis for believing that this sample was representative of all U.S. DGUs, with respect to number of rounds fired or any other attribute of the events. Therefore, it was impossible to legitimately infer from an analysis of this sample the fraction of all U.S. DGUs that involve more than 10

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rounds fired by the defender. Anyone who was a genuine expert on the conditions under which one can infer conclusions about a population from a sample would never draw the conclusions that Ms. Allen drew, based on the sample she analyzed. This by itself is a strong indication that she is not an expert on these matters.

30. Further, even if NRA staff had somehow selected a simple random sample of all DGUs, there were far too few cases in the NRA sample analyzed by Allen. (n=279) to reliably estimate the share of DGU incidents that involved more than 10 rounds being fired, if such incidents are relatively rare, though not as rare as Allen claims. Consider the implications, for example, if just 1% of all DGUs involved over 10 rounds being fired. Since national surveys that have specifically asked about DGUs have consistently indicated 0.5-3.5 million DGUs per year, it would be reasonable to assume an annual average of at least 1 million DGUs. *If this were the total frequency of DGUs, 1% would imply a number of DGU incidents with over 10 rounds fired that was huge in absolute terms – about 10,000 per year.* Thus, this percentage does not have to be very large in order for it to imply a huge absolute number of incidents.

31. Even if the NRA sample were a representative simple random sample of all DGUs, Allen's results would not be statistically sufficient to reject the idea that 1% of DGUs involved over 10 rounds fired. Ms. Allen's finding of 0% of DGUs with over 10 rounds fired *in her small sample of DGUs* is actually not statistically inconsistent with the hypothesis that 1% of the *entire population* of DGUs involve over 10 rounds fired, since her 0% result is well within the bounds of what one could reasonably expect as a sample result in a randomly selected sample of just 279 cases. Samples selected from larger populations of events do not all perfectly resemble the population, since they are always subject to random sampling error. That is, due to the random character of the sampling process, an analyst may, by pure chance, obtain a sample that contains either more or fewer of the events of interest than would be the case if the sample resembled the population perfectly.

32. The 95% confidence interval (CI) estimate of the percent of DGUs with over 10 rounds fired(symbolized as p) is a range in which one would expect to find 95% of all the estimates one would obtain

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if one selected an infinite number of samples of a given size. If one assumes that the true population percentage is 1% (p=.01), the 95% CI is -0.17 to 2.17%. This is the result of the following computations:
33. The formula for the 95% CI is: p plus or minus 1.96 (square root of (p x q)/n), where q=1-p

34. If p=.01, then the 95% CI = 0.01 + -1.96 (square root of (.01 x .99)/279) =0.01 + -0.01168 = -0.00168 to .02168, or -0.168% to 2.168%

35. This means that if the true population percentage of DGUs with over 10 rounds fired were 1%, and one took an infinite number of random samples, each with 279 DGUs, one would expect 95% of sample estimates of this percentage to be between -0.168% and 2.168%. Of course, percentages can't really go below 0, but this is what statistical theory predicts.

36. In plain English, what this means is that even if 1% of <u>all</u> DGUs involved over 10 rounds, one could nevertheless realistically expect to get a percentage of 0 in a sample of 279 DGUs, due solely to random sampling error. Thus, getting a sample result of 0%, as Allen did, is not a statistically significant result allowing one to reliably reject the idea that the percentage in the population of all DGUs with over 10 rounds fired is 1%.

37. SF quibbles with my assertions about civilian marksmanship in DGU incidents, but seem unaware of the implications of their own arguments (10/21-22). They note that the 37% hit rate I cited in my Declaration was a per-incident rate, not a per bullet hit rate (just as I accurately noted in the Declaration). The per bullet hit rate, however, will necessarily be even lower since at least some incidents involve multiple bullets being fired, meaning that the denominator in the hit rate (number of bullets fired) would be even larger, and the per bullet hit rate even lower, than the per-incident rate. This in turn implies that lawful defenders would need even more rounds to achieve a given number of hits, i.e. be in even greater need of larger capacity magazines. SF's comment, then, supports the Plaintiffs' case rather than undercutting it.

38. SF states that "even if ... a civilian is likely to miss with 63% of his bullets, he is still likely to hit -15-

*a* target with a legal 10-round magazine" (10/25-27). This is misleading because, as noted in the previous paragraph, the per bullet hit rate is lower than 37%, so civilian defenders would miss with *more than* 63% of their rounds, by SF's own reasoning.

39. SF then notes that I offered no evidence that it is "a realistic prospect" for a crime victim to ever face four or more attackers (10/27-28). Here again, SF relies on vagueness of phrasing to avoid refutation by not specifying what it means be a "realistic prospect" or how often such crimes would have to occur before SF regarded this as a "realistic prospect." One would also have to say it is not a "realistic prospect" that any one American will ever be a victim of a mass shooter, but SF obviously does not consider this to be a valid argument against their LCM ban. And it is not likely to be consolation to someone whose loved one was killed in a crime with four or more offenders that it was not a "realistic prospect" that such a crime would occur. In any case, the policy-relevant issue is whether DGUs in which victims face four or more offenders occur *often enough* for the number of lives saved or injuries avoided by defensive LCM use to exceed the number of such harms caused by LCM use of offenders. Since the latter number is close to zero, even if crimes with four or more offenders were quite rare, they could still result in far more harm averted by victim defensive use of LCMs than harm caused by offender use.

40. Assume a rarity of such crimes consistent with SF's notion of events that were so rare as to not be a "realistic prospect." Suppose that only a tenth of 1% of DGUs involved victims facing four or more victims. Since there are at least a million DGUs per year, this would imply 1,000 such DGUs a year, compared to less than one mass shooting per year in which LCM use caused more casualties.

41. It is worth noting that the only reason I "offer[ed] no evidence that [facing four or more offenders] is a realistic prospect" is simply because published NCVS data do not provide sufficiently detailed breakdowns of number of offenders. SF offers no evidence that such crimes do <u>not</u> occur frequently.

42. NCVS respondents, however, were asked for the exact number of offenders, so I therefore examined an NCVS dataset I happened to have on my hard drive, covering the period 1992-1994. My analysis of that dataset indicated that the NCVS estimated, for 1992-1994, that there were 30,497,554

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violent crimes in which victims directly confronted offenders and could state the number of offenders. Of these, 6,368,235 involved multiple offenders. Of these, 1,997,481 involved four or more offenders. Since this total pertained to a three-year period, the annual average was 665,827. Thus, during that period American crime victims faced four or more offenders in 665,827 violent crime incidents per year. This was a peak crime period, but even if there were half as many in recent years, the annual total would be about 333,000. In short, by any reasonable standard, it is an eminently "realistic prospect" that an American crime victim would face four or more offenders in a violent crime.

43. John Donahue makes, or hints at, a plainly false claim in his paragraph 11. He vaguely alludes to "a review of the resolution (sic) of mass shootings in the U.S." on which he based his conclusions, but does not say if this is a review he performed or if he was instead citing a review conducted by others. If it is the former, he failed to describe or even briefly outline the methods by which he conducted the review, making it impossible to judge whether it was competently done. If it is the latter, he failed to cite a source where a reader could find a detailed description of the "review." Expert scholars describe their methods and cite sources. As things stand, there is no reliable basis for believing Donahue was doing anything in paragraph 11 other than stating his own unsupported personal opinions.

44. His specific claim is that "citizens have frequently taken advantage of a perpetrator stopping to reload his weapon to tackle him or otherwise subdue him *in at least 20 separate shootings in the United States since 1991*" (Donahue Declaration, p. 4). Donahue does not claim that these "shootings" were mass shootings or that they involved semiautomatic weapons, multiple firearms, and multiple magazines, which are normally used by mass shooters. There may well be shootings in which bystanders subdued shooters while they reloaded, in shootings bearing little resemblance to mass shootings, such as shootings in which the perpetrators used types of firearms that take far longer to reload than the semi-automatic firearms used in most mass shootings. These sorts of cases, however, would tell us nothing about whether banning LCMs would do any good, because they have no relevance to the willingness of bystanders to intervene when shooters have semi-automatic guns capable of accepting detachable, possibly large-capacity, magazines. It

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is the latter sorts of shootings that are relevant to the question of whether LCMs should be banned. In short, if Donahue's undocumented 20 shooting incidents were radically different from the mass shootings in which LCMs might contribute to the casualty count, they are irrelevant to the merits of an LCM ban. In any case, Donahue does not cite 20 specific cases, or cite any external sources that document these 20 cases. Further, I am not aware of more than two or three such cases over the past thirty years.

45. Instead, Donahue cites only three cases that he claims fit his description, and then tosses in a fourth case that, even based on his own inaccurate description, did not involve victims subduing a shooter, while he was reloading or at any other time. The first case, occurring near the White House, was not a mass shooting; indeed, the gunman did not shoot a single person. Further, there was no indication he was going to shoot any other the people who tackled him, making it far safer to do so than would be the case in a mass shooting. The incident was indeed a shooting in the sense that a person was criminally firing a gun, but was not a shooting in the sense that the gunman was shooting people. It therefore has no clear relevance to the merits of banning LCMs.

46. The 1993 Long Island shooting cited by Donahue does genuinely fit Donahue's description, but the 2011 shooting involving Gabby Giffords is not so clear, as explained above in Paragraph 17, because it cannot be determined from eyewitness accounts whether bystanders were able to subdue the shooter because he was reloading (as Donahue claims) or because he was struggling with a malfunctioning magazine (a spring broke in one of the magazines he was using, or trying to use). If the latter is correct, it does not help support an LCM ban, since any magazine, of any size, might fail, thereby giving bystanders a chance to intervene. Finally, Donahue makes the same speculative and unfounded claim about 11 children at Sandy Hook Elementary School being able to escape because the shooter was reloading refuted above in Paragraphs 18-19.

47. In sum, Donahue could cite only one genuinely supportive incident (the 1993 Long Island shooting), and one possibly supportive case (the Gabby Giffords shooting), over a period of 30 years, to support his claim that citizens have "frequently" subdued shooters while they stopped to reload. One or

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1	two cases in 30 probably would not fit most people's notions of what "frequently" means. As to his claim		
2	that there have been "at least 20 separate shootings" where this happened, Donahue provides no		
3	documentation at all. Twenty cases in thirty years, in a nation with over 300 million people, is not very		
4	frequent either, but Donahue did not supply supporting evidence of this many or even half this many.		
5	Attached hereto as Exhibit F is a true and correct excerpt of my book, Targeting Guns: Firearms and Their		
6	Control 125 (Aldine De Gruyter 1997).		
7	I declare under penalty of perjury that the foregoing is true and correct. Executed within the United		
8 0	States on January 30, 2014.		
10	Lang bleck		
11	Gary Klę¢k		
12			
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# EXHIBIT "F"

#### Assault Rifles and Assault Weapons

wounded. There is usually much less information available from press accounts about incidents involving fewer victims, and it would be harder to argue for the significance of large magazine capacity in connection with cases with fewer victims, and thus presumably fewer shots fired.

Of the fifteen mass shootings, no more than four involved weapons banned under any existing federal or state AW bans: the Gian Luigi Ferri case, which involved two Intratec DC9 pistols; the Joseph Wesbecker case, involving a gun loosely described as an "AK-47," which might fall within the banned category; the Patrick Purdy case, which involved a Model 56S variant of an AKM-47; and the James Huberty incident, which involved a semiautomatic Uzi carbine. In all four of these cases the killer was also armed with other, non-AW guns, and it is therefore not clear how many of the wounds were inflicted with AWs. For example, it is not known if any of Huberty's victims were killed with the Uzi because he also used an ordinary Browning pistol, which used the same caliber ammunition (9 mm) as the Uzi and at least half of the dead victims were killed with a shotgun. In eleven of the seventeen mass shootings, the killer was armed with multiple guns, and in at least five cases it was known that the killers reloaded their guns at least once (Ferguson, Hennard, Purdy, Sherril, and Huberty). Both of these facts support the assertion that in these cases the killer did not require a single gun with a large magazine to kill or wound so many people.

For those incidents where the number of rounds fired and the duration of the shooting were both reported, the rate of fire never was faster than about one round every two seconds, and was usually much slower than that. Witnesses commonly reported that the killers went about their deadly work in a "calm," "matter-of-fact," or "almost methodical" fashion, taking careful aim at victims and seemingly taking their time (e.g., Los Angeles Times, 19 July 1984, p. 1, 18 January 1989, p. 3; Washington Post, 15 September 1989, p. A1; Houston Post, 17 October 1991, p. A-1). For example, Joseph Wesbecker, who killed seven people and wounded seventeen over a period of thirty minutes, "showed extreme "shooting discipline," ... firing directly at his human targets and taking few random shots" (Louisville Courier Journal, 15 September 1989). None of the mass killers maintained a sustained rate of fire that could not also have been maintained-even taking reloading time into account-with either multiple guns or with an ordinary six-shot revolver and the common loading devices known as "speedloaders." Further, there is no evidence that these killers could not have taken more time than they actually did.

Inflicting the number of casualties in even these extreme and rare cases did not require the large-capacity magazines and/or high rate of fire provided by either AWs or by semiautomatic guns in general. It therefore is highly unlikely that shootings with fewer rounds fired and fewer vic-

1	IN THE UNITED STATES DISTRICT COURT			
2	NORTHERN DISTRICT OF CALIFORNIA			
3	SAN FRANCISCO DIVISION			
4	SAN FRANCISCO VETERAN POLICE ) OFFICERS ASSOCIATION, LARRY )	) CASE NO: 13-CV-13-5351 WHA		
5 6	ARTHUR RITCHIE, and RANDALL LOW,)	CERTIFICATE OF SERVICE		
7	Plaintiffs,			
, 8	v. )			
9	THE CITY AND COUNTY OF SAN () FRANCISCO, THE MAYOR OF SAN ()			
10	capacity, THE CHIEF OF THE SAN			
11	GREG SUHR, in his official capacity, and ) DOES 1-10,			
12				
13	Defendants.			
14	IT IS HEREBY CERTIFIED THAT:			
15 16	I, the undersigned, am a citizen of the United States and am at least eighteen years of age. My business address is 180 E. Ocean Blvd., Suite 200, Long Beach, California, 90802.			
17	I am not a party to the above-entitled action. I have caused service of SUPPLEMENTAL DECLARATION OF GARY KLECK IN SUPPORT OF PLAINTIFFS REPLY TO DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION FOR			
18				
19	on the following party by electronically filing	the foregoing with the Clerk of the District Court		
20	on the following party by electronically filing the foregoing with the Clerk of the District Court using its ECF System, which electronically notifies them.			
21	Wayne Snodgrass, Deputy City Attorney			
22	Office of the City Attorney			
23	City Hall, Room 234			
24	San Francisco, CA 94102			
25 25	I declare under penalty of perjury that the foregoing is true and correct. Executed on January 30, 2014.			
26 25	/s/ C. D. Michel			
27	C. D. Michel Attorney for Plaintiffs			
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