

1 XAVIER BECERRA, State Bar No. 118517
 Attorney General of California
 2 TAMAR PACHTER, State Bar No. 146083
 Supervising Deputy Attorney General
 3 ALEXANDRA ROBERT GORDON, State Bar No.
 207650
 4 JOHN D. ECHEVERRIA, State Bar No. 268843
 Deputy Attorneys General
 455 Golden Gate Avenue, Suite 11000
 5 San Francisco, CA 94102-7004
 Telephone: (415) 703-5509
 6 Fax: (415) 703-5480
 E-mail: Alexandra.RobertGordon@doj.ca.gov
 7 *Attorneys for Defendants*

8
 9 IN THE UNITED STATES DISTRICT COURT
 10 FOR THE EASTERN DISTRICT OF CALIFORNIA
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12
 13 **WILLIAM WIESE, et al.,**

14 Plaintiff,

15 v.

16 **XAVIER BECERRA, et al.,**

17 Defendant.
 18

2:17-cv-00903-WBS-KJN

DECLARATION OF LUCY P. ALLEN

Date: June 16, 2017
 Time: 10:00 a.m.
 Courtroom: 5, 14th Floor
 Judge: Hon. William B. Shubb
 Trial Date: None Set
 Action Filed: April 28, 2017

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DECLARATION OF LUCY P. ALLEN

I, Lucy P. Allen, declare as follows:

1. I am a Managing Director of NERA Economic Consulting (“NERA”), a member of NERA’s Securities and Finance Practice and Chair of NERA’s Product Liability and Mass Torts Practice. NERA provides practical economic advice related to highly complex business and legal issues arising from competition, regulation, public policy, strategy, finance, and litigation. NERA was established in 1961 and now employs approximately 500 people in more than 20 offices worldwide.

2. In my over 20 years at NERA, I have been engaged as an economic consultant or expert witness in numerous projects involving economic and statistical analysis. I have been qualified as an expert and testified in court on various economic and statistical issues relating to the flow of guns into the criminal market. I have testified at trials in Federal District Court, before the New York City Council Public Safety Committee, the American Arbitration Association and the Judicial Arbitration Mediation Service, as well as in depositions.

3. I have an A.B. from Stanford University, an M.B.A. from Yale University, and M.A. and M. Phil. degrees in Economics, also from Yale University. Prior to joining NERA, I was an Economist for both President George H. W. Bush’s and President Bill Clinton’s Council of Economic Advisers.

4. This declaration addresses the results of analyses that I and others under my direction at NERA conducted with respect to the following issues: (a) the number of rounds of ammunition fired by individuals using a gun in self-defense; and (b) the use of large-capacity magazines in mass shootings.

1 **A. Number of rounds fired by individuals in self-defense**

2 5. Plaintiffs claim the banned “large-capacity magazines” (which are magazines
3 capable of holding more than ten rounds) are commonly used in the home for self-defense.¹

4 6. Data from the NRA Institute for Legislative Action (“NRA-ILA”) indicates that it
5 is rare for a person, when using a firearm in self-defense, to fire more than ten rounds. The NRA-
6 ILA maintains a database of “armed citizen” stories describing private citizens who have
7 successfully defended themselves, or others, using a firearm. Although it is not compiled
8 scientifically, this is the largest collection of accounts of citizen self-defense of which I am aware.
9 Moreover, in light of the positions taken by the entity compiling the data, I would expect that any
10 selection bias would be in favor of stories that put use of guns in self-defense in the best possible
11 light.

12 7. A study of all incidents in this database over a 5-year period from 1997 through
13 2001 found that it is rare for individuals to defend themselves using more than ten rounds.
14 Specifically, this study found that, on average, 2.2 shots were fired by defenders and that in 28%
15 of incidents of armed citizens defending themselves the individuals fired no shots at all.²

16 8. We performed a similar analysis of NRA-ILA stories published between January
17 2011 and May 2017. For each incident, the number of offenders, defenders, and shots fired were
18 tabulated, along with the location, nature and outcome of the crime. The information was
19 gathered for each incident from both the NRA-ILA synopsis and, where available, one additional
20 news story.³

21
22 ¹ See, for example, First Amended Complaint for Declaratory and Injunctive Relief, dated June
5, 2017, ¶¶1, 6, 24 and 34.

23 ² Claude Werner, “The Armed Citizen – A Five Year Analysis.”

24 ³ An additional news story verifying the NRA-ILA synopsis was available for 95% of incidents
(702 out of 736 incidents).

25 The following incidents were excluded from the analysis: (1) repeat stories, (2) wild animal
26 attacks, and (3) one incident where the supposed victim later pleaded guilty to covering up a
27 murder. When the exact number of shots fired was not specified, the average for the most
28 relevant incidents with known number of shots was used. For example, if the stories indicated
that “shots were fired” this would indicate that at least two shots were fired and thus we used
the average number of shots fired in all incidents in which two or more shots were fired and
the number of shots was specified.

9. According to this analysis, defenders fired 2.2 shots on average. Out of 736 incidents, there were two incidents (0.3% of all incidents), in which the defender was reported to have fired more than 10 bullets. In 18.2% of incidents, the defender did not fire any shots, and simply threatened the offender with a gun. For incidents occurring in the home (56% of total), defenders fired an average of 2.1 shots, and fired no shots in 16.1% of incidents. The table below summarizes some of these findings.

**Number of Shots Fired in Self-Defense
Based on NRA-ILA Armed Citizen Incidents in the United States
January 2011 - May 2017**

	<u>Shots Fired by Individual in Self-Defense</u>	
	<u>Overall</u>	<u>Incidents in Home</u>
Average Shots Fired	2.2	2.1
Number of Incidents with No Shots Fired	134	66
Percent of Incidents with No Shots Fired	18.2%	16.1%
Number of Incidents with >10 Shots Fired	2	2
Percent of Incidents with >10 Shots Fired	0.3%	0.5%

Notes and Sources:

Events from NRA-ILA Armed Citizen database covering 736 incidents from January 2011 through May 2017. Excludes repeat stories, wild animal attacks and one incident where the supposed victim later pleaded guilty to covering up a murder.

10. We also performed this analysis for incidents that occurred in California. According to this analysis, defenders fired 2.0 shots on average. Out of 47 incidents, there were no incidents in which the defender was reported to have fired more than 10 bullets. In 27.7% of incidents, the defender did not fire any shots, and simply threatened the offender with a gun. For incidents occurring in the home (60% of total), defenders fired an average of 1.9 shots, and fired no shots in 32.1% of incidents. The table below summarizes some of these findings for California.

**Number of Shots Fired in Self-Defense
Based on NRA-ILA Armed Citizen Incidents in California
January 2011 - May 2017**

	<u>Shots Fired by Individual in Self-Defense</u>	
	<u>Overall</u>	<u>Incidents in Home</u>
Average Shots Fired	2.0	1.9
Number of Incidents with No Shots Fired	13	9
Percent of Incidents with No Shots Fired	27.7%	32.1%
Number of Incidents with >10 Shots Fired	0	0
Percent of Incidents with >10 Shots Fired	0.0%	0.0%

Notes and Sources:

Events from NRA-ILA Armed Citizen database covering 47 incidents from January 2011 through May 2017. Excludes repeat stories, wild animal attacks and one incident where the supposed victim later pleaded guilty to covering up a murder.

B. Mass shootings**1. Use of large-capacity magazines in mass shootings**

11. We found two comprehensive sources detailing historical mass shootings: 1) “US Mass Shootings, 1982-2017: Data From Mother Jones’ Investigation,” published by Mother Jones and 2) “Mass Shooting Incidents in America (1984-2012),” published by the Citizens Crime Commission of New York City. See attached Table 1 for a summary of the combined data.

12. The definition of mass shooting and the period covered differed somewhat for each of the sources. Mother Jones covers 86 mass shootings from 1982 to 2017.⁴ Mother Jones includes mass shootings in which a shooter killed four or more people in one incident in a public

⁴ “US Mass Shootings, 1982-2017: Data From Mother Jones’ Investigation,” *Mother Jones*, updated January 8, 2017. <http://www.motherjones.com/politics/2012/12/mass-shootings-mother-jones-full-data>, accessed June 1, 2017.

1 place and excludes crimes involving armed robbery or gang violence.⁵ Starting in January 2013,
2 Mother Jones changed its definition of a mass shooting to include instances when a shooter killed
3 three or more people, consistent with a change in the federal definition of a mass shooting.⁶
4 Citizens Crime Commission covers 33 mass shootings from 1984 to 2012. Citizens Crime
5 Commission includes mass shootings in which a shooter killed four or more people and the gun
6 used by the shooter had a magazine with capacity greater than ten.⁷ We updated the data on shots
7 fired for mass shootings where available.

8 13. Based on the combined data we found that large-capacity magazines (those with a
9 capacity to hold more than 10 rounds of ammunition) are often used in mass shootings. Such
10 large-capacity magazines were used in the majority of the mass shootings with known magazine
11 capacity since 1982 (44 out of 50 mass shootings).⁸ In the past two years, guns with large-
12 capacity magazines were used in eight of the nine mass shootings with known magazine
13 capacity.⁹

14 14. The data indicates that it is common for offenders to fire more than ten rounds
15 when using a gun with a large-capacity magazine in mass shootings. In particular, in mass
16 shootings that involved use of large-capacity magazine guns, the average number of shots fired
17 was 75.¹⁰

18 ⁵ “A Guide to Mass Shootings in America,” *Mother Jones*, updated April 19, 2017.
19 <http://www.motherjones.com/politics/2012/07/mass-shootings-map>. See, also, “What Exactly
20 is a Mass Shooting,” *Mother Jones*, August 14, 2012.
21 <http://www.motherjones.com/mojo/2012/08/what-is-a-mass-shooting>

22 ⁶ “A Guide to Mass Shootings in America,” *Mother Jones*, updated April 19, 2017.
23 <http://www.motherjones.com/politics/2012/07/mass-shootings-map>.

24 The Mother Jones data includes three incidents involving two shooters (Columbine High
25 School, San Bernardino and Westside Middle School).

26 ⁷ “Mass Shooting Incidents in America (1984-2012),” *Citizens Crime Commission of New York
27 City*. <http://www.nycrimecommission.org/mass-shooting-incidents-america.php>, accessed June
28 1, 2017.

⁸ For many of the mass shootings, the data does not indicate whether a large-capacity magazine
is used. Based only on Mother Jones data, large capacity magazines were used in 42 out of 48
mass shootings with known magazine capacity.

⁹ During the past two years, there were six additional mass shootings in which the magazine
capacity was unknown.

¹⁰ There were 31 mass shootings in which the magazine capacity and the number of shots fired
were known.

1 **2. Casualties in mass shootings with large-capacity magazine guns compared with**
2 **other mass shootings**

3 15. Based on our analysis of the combined mass shootings data in the past 35 years,
4 casualties were higher in the mass shootings that involved large-capacity magazine guns than in
5 other mass shootings. In particular, we found an average number of fatalities or injuries of 22 per
6 mass shooting with a large-capacity magazine versus 9 for those without.¹¹

7 **3. Mass shootings with only one gun and large capacity magazines**

8 16. Based on our analysis of the combined mass shootings data in the past 35 years,
9 there have been 44 incidents (88% of the 50 mass shootings with known magazine capacity) in
10 which the shooter used a large capacity magazine. There have been 36 incidents (41% of the 88
11 mass shootings) in which the shooter had only one gun. There were 16 incidents (32% of the 50
12 mass shootings with known magazine capacity) where the shooter had only one gun and used a
13 large capacity magazine. An average of 14 people were killed or injured in each of these 16 mass
14 shootings.¹²

15 **4. Percent of mass shooters' guns legally obtained**

16 17. The combined data on mass shootings indicates that the majority of guns used in
17 mass shootings were obtained legally. Shooters in 76% of mass shootings in the past 35 years
18 obtained their guns legally (at least 67 of the 88 mass shootings) and almost 76% of the guns used
19 in these 88 mass shootings were obtained legally (at least 147 of the 194 guns).

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21
22 ¹¹ A 2013 study by Mayors Against Illegal Guns similarly found that when mass shootings
23 involved assault weapons or high capacity magazine, the number of deaths was higher. The
24 study was based on data from the FBI and media reports covering the period January 2009
25 through January 2013. The study found that mass shootings where assault weapons or high-
capacity magazines were used resulted in an average of 14.4 people shot and 7.8 deaths versus
other mass shootings that resulted in 5.7 people shot and 4.8 deaths. See, "Analysis of Recent
Mass Shootings," *Mayors Against Illegal Guns*, September, 2013.

26 ¹² An analysis of only the mass shootings identified by Mother Jones yielded similar results: 1)
27 Large capacity magazines were used in 42 out of the 48 mass shootings with known magazine
28 capacity; 2) The shooter had only one gun in 34 out of the 86 mass shootings; 3) The shooter
had only one gun and used a large capacity magazine in 14 of the 48 shootings with known
magazine capacity. An average of 14 people were killed or injured during these 14 mass
shootings.

1 Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and
2 correct.

3

4 Executed on: June 15, 2017

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A handwritten signature in blue ink, appearing to read "Lucy P. Allen", is written over a horizontal line.

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Lucy P. Allen

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CERTIFICATE OF SERVICE

Case Name: **Wiese, William, et al. v. Xavier Becerra, et al.** No. **2:17-cv-00903-WBS-KJN**

I hereby certify that on June 15, 2017, I electronically filed the following documents with the Clerk of the Court by using the CM/ECF system:

DECLARATION OF LUCY P. ALLEN

I certify that **all** participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

I declare under penalty of perjury under the laws of the State of California the foregoing is true and correct and that this declaration was executed on June 15, 2017, at San Francisco, California.

N. Newlin
Declarant

/s/ N. Newlin
Signature

Table 1

Table 1
Combined Mass Shootings Data
1982 – 2017

Case	Location	Date	Source	Large Cap. Mag.? ¹	Fatalities ²	Injuries ²	Total Fatalities & Injuries ²	Shots Fired	Gun(s) Obtained Legally?	Offenders' Number of Guns
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Fresno Downtown	Fresno, CA	4/18/2017	MJ	No	3	0	3	16 ^a	-	1
2. Fort Lauderdale Airport	Fort Lauderdale, FL	1/6/2017	MJ	-	5	6	11	-	Yes	1
3. Cascade Mall	Burlington, WA	9/23/2016	MJ	-	5	0	5	-	-	1
4. Baton Rouge Police	Baton Rouge, LA	7/17/2016	MJ	Yes	3	3	6	-	-	3
5. Dallas Police	Dallas, TX	7/7/2016	MJ	Yes	5	11	16	-	Yes	3
6. Orlando Nightclub	Orlando, FL	6/12/2016	MJ	Yes	49	53	102	-	Yes	2
7. Excel Industries	Hesston, KS	2/25/2016	MJ	Yes	3	14	17	-	Yes	2
8. Kalamazoo	Kalamazoo County, MI	2/20/2016	MJ	-	6	2	8	-	Yes	1
9. San Bernardino	San Bernardino, CA	12/2/2015	MJ	Yes	14	21	35	150 ^b	Yes	4
10. Planned Parenthood Clinic	Colorado Springs, CO	11/27/2015	MJ	-	3	9	12	-	-	1
11. Colorado Springs	Colorado Springs, CO	10/31/2015	MJ	Yes	3	0	3	-	Yes	3
12. Umpqua Community College	Roseburg, OR	10/1/2015	MJ	-	9	9	18	-	Yes	6
13. Chattanooga Military Center	Chattanooga, TN	7/16/2015	MJ	Yes	5	2	7	-	Yes	3
14. Charleston Church	Charleston, SC	6/17/2015	MJ	Yes	9	1	10	-	Yes	1
15. Trestle Trail Bridge	Menasha, WI	6/11/2015	MJ	-	3	1	4	-	Yes	2
16. Marysville High School	Marysville, WA	10/24/2014	MJ	-	5	1	6	-	Stolen	1
17. Isla Vista	Santa Barbara, CA	5/23/2014	MJ	Yes	6	13	19	-	Yes	3
18. Fort Hood	Fort Hood, TX	4/3/2014	MJ	-	3	12	15	-	Yes	1
19. Alturas Tribal	Alturas, CA	2/20/2014	MJ	-	4	2	6	-	-	2
20. Washington Navy Yard	Washington, D.C.	9/16/2013	MJ	-	12	8	20	-	Yes	2
21. Hialeah	Hialeah, FL	7/26/2013	MJ	Yes	7	0	7	10 ^c	Yes	1
22. Santa Monica	Santa Monica, CA	6/7/2013	MJ	Yes	6	3	9	70 ^d	Yes	2
23. Federal Way	Federal Way, WA	4/21/2013	MJ	-	5	0	5	-	Yes	2
24. Upstate New York	Herkimer County, NY	3/13/2013	MJ	-	5	2	7	-	Yes	1
25. Newtown School	Newtown, CT	12/14/2012	MJ/CC	Yes	28	2	30/28	154	Stolen	4/3

Table 1
Combined Mass Shootings Data
1982 – 2017

Case	Location	Date	Source	Large Cap. Mag.¹	Fatalities²	Injuries²	Total Fatalities & Injuries²	Shots Fired	Gun(s) Obtained Legally?	Offenders' Number of Guns
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
26. Accent Signage Systems	Minneapolis, MN	9/27/2012	MJ/CC	Yes	7	1/2	8/9	46	Yes	1
27. Sikh Temple	Oak Creek, WI	8/5/2012	MJ/CC	Yes	7	3	10	-	Yes	1
28. Aurora Movie Theater	Aurora, CO	7/20/2012	MJ/CC	Yes	12	70	82	80	Yes	4
29. Seattle Café	Seattle, WA	5/30/2012	MJ	-	6	1	7	-	Yes	2
30. Oikos University	Oakland, CA	4/2/2012	MJ	No	7	3	10	-	Yes	1
31. Su Jung Health Sauna	Norcross, GA	2/22/2012	MJ	-	5	0	5	-	Yes	1
32. Seal Beach	Seal Beach, CA	10/14/2011	MJ	-	8	1	9	-	Yes	3
33. IHOP	Carson City, NV	9/6/2011	MJ/CC	Yes	5	7	12	-	Yes	3
34. Grand Rapids	Grand Rapids, MI	7/7/2011	CC	Yes	8	2	10	10	-	1
35. Tucson	Tucson, AZ	1/8/2011	MJ/CC	Yes	6	13	19	33	Yes	1
36. Hartford Beer Distributor	Manchester, CT	8/3/2010	MJ/CC	Yes	9	2	11	11	Yes	2
37. Coffee Shop Police	Parkland, WA	11/29/2009	MJ	-	4	1	5	-	Stolen	2
38. Fort Hood	Fort Hood, TX	11/5/2009	MJ/CC	Yes	13	30/32	43/45	214	Yes	1
39. Binghamton	Binghamton, NY	4/3/2009	MJ/CC	Yes	14	4	18	99	Yes	2
40. Carthage Nursing Home	Carthage, NC	3/29/2009	MJ	No	8	3	11	-	Yes	2
41. Atlantis Plastics	Henderson, KY	6/25/2008	MJ	-	6	1	7	-	Yes	1
42. Northern Illinois University	DeKalb, IL	2/14/2008	MJ/CC	Yes	6	21	27	54	Yes	4
43. Kirkwood City Council	Kirkwood, MO	2/7/2008	MJ	-	6	2	8	-	Stolen	2
44. Westroads Mall	Omaha, NE	12/5/2007	MJ/CC	Yes	9	4/5	13/14	14	Stolen	1
45. Crandon	Crandon, WI	10/7/2007	MJ	-	6	1	7	-	Yes	1
46. Virginia Tech	Blacksburg, VA	4/16/2007	MJ/CC	Yes	32/33	23/17	55/50	176	Yes	2
47. Trolley Square	Salt Lake City, UT	2/12/2007	MJ	No	6	4	10	-	No	2
48. Amish School	Lancaster County, PA	10/2/2006	MJ	-	6	5	11	-	Yes	3
49. Capitol Hill	Seattle, WA	3/25/2006	MJ	-	7	2	9	-	Yes	4
50. Goleta Postal	Goleta, CA	1/30/2006	MJ/CC	Yes	8	0	8	-	Yes	1

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
51. Red Lake	Red Lake, MN	3/21/2005	MJ	-	10	5	15	-	Stolen	3
52. Living Church of God	Brookfield, WI	3/12/2005	MJ	-	7	4	11	-	Yes	1
53. Damageplan Show	Columbus, OH	12/8/2004	MJ	-	5	7	12	-	Yes	1
54. Hunting Camp	Meteor, WI	11/21/2004	CC	Yes	6	3	9	20	-	1
55. Lockheed Martin	Meridian, MS	7/8/2003	MJ	-	7	8	15	-	Yes	5
56. Navistar	Melrose Park, IL	2/5/2001	MJ	-	5	4	9	-	Yes	4
57. Wakefield	Wakefield, MA	12/26/2000	MJ/CC	Yes	7	0	7	37	Yes	3
58. Hotel	Tampa, FL	12/30/1999	MJ	-	5	3	8	-	Yes	2
59. Xerox	Honolulu, HI	11/2/1999	MJ/CC	Yes	7	0	7	28	Yes	1
60. Wedgwood Baptist Church	Fort Worth, TX	9/15/1999	MJ/CC	Yes	8	7	15	30	Yes	2
61. Atlanta Day Trading	Atlanta, GA	7/29/1999	MJ	-	9	13	22	-	Yes	4
62. Columbine High School	Littleton, CO	4/20/1999	MJ/CC	Yes	13/15	24	37/39	188	No	4
63. Thurston High School	Springfield, OR	5/21/1998	MJ/CC	Yes	4	25	29	50	No	3
64. Westside Middle School	Jonesboro, AR	3/24/1998	MJ/CC	Yes	5	10	15	26	Stolen	9/10
65. Connecticut Lottery	Newington, CT	3/6/1998	MJ/CC	Yes	5	1/0	6/5	5	Yes	1
66. Caltrans Maintenance Yard	Orange, CA	12/18/1997	MJ/CC	Yes	5	2	7	144	Yes	1
67. R.E. Phelon Company	Aiken, SC	9/15/1997	MJ	-	4	3	7	-	No	1
68. Fort Lauderdale	Fort Lauderdale, FL	2/9/1996	MJ	-	6	1	7	-	Yes	2
69. Walter Rossler Company	Corpus Christi, TX	4/3/1995	MJ	-	6	0	6	-	Yes	2
70. Air Force Base	Fairchild Base, WA	6/20/1994	MJ/CC	Yes	5/6	23	28/29	-	Yes	1
71. Chuck E. Cheese	Aurora, CO	12/14/1993	MJ	-	4	1	5	-	-	1
72. Long Island Railroad	Garden City, NY	12/7/1993	MJ/CC	Yes	6	19	25	30	Yes	1
73. Luigi's Restaurant	Fayetteville, NC	8/6/1993	MJ	-	4	8	12	-	Yes	3
74. 101 California Street	San Francisco, CA	7/1/1993	MJ/CC	Yes	9	6	15	75	No	3
75. Watkins Glen	Watkins Glen, NY	10/15/1992	MJ	-	5	0	5	-	Yes	1

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Combined Mass Shootings Data
1982 – 2017

Case	Location	Date	Source	Large Cap. Mag. ¹	Fatalities ²	Injuries ²	Total Fatalities & Injuries ²	Shots Fired	Gun(s) Obtained Legally?	Offenders' Number of Guns
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
76. Lindhurst High School	Olivehurst, CA	5/1/1992	MJ	-	4	10	14	-	Yes	2
77. Royal Oak Postal	Royal Oak, MI	11/14/1991	MJ	-	5	5	10	-	Yes	1
78. University of Iowa	Iowa City, IA	11/1/1991	MJ	No	6	1	7	-	Yes	1
79. Luby's Cafeteria	Killeen, TX	10/16/1991	MJ/CC	Yes	24	20	44	100	Yes	2
80. GMAC	Jacksonville, FL	6/18/1990	MJ/CC	Yes	10	4	14	14	Yes	2
81. Standard Gravure Corporation	Louisville, KY	9/14/1989	MJ/CC	Yes	9	12	21	21	Yes	5
82. Stockton Schoolyard	Stockton, CA	1/17/1989	MJ/CC	Yes	6	29/30	35/36	106	Yes	2
83. ESL	Sunnyvale, CA	2/16/1988	MJ	-	7	4	11	-	Yes	7
84. Shopping Centers	Palm Bay, FL	4/23/1987	MJ/CC	Yes	6	14/10	20/16	-	Yes	3
85. United States Postal Service	Edmond, OK	8/20/1986	MJ	-	15	6	21	-	Yes	3
86. San Ysidro McDonald's	San Ysidro, CA	7/18/1984	MJ/CC	Yes	22	19	41	257	Yes	3
87. Dallas Nightclub	Dallas, TX	6/29/1984	MJ/CC	Yes	6	1	7	-	No	1
88. Welding Shop	Miami, FL	8/20/1982	MJ	No	8	3	11	-	Yes	1
Average					8.0	7.7	15.7	73		
Large Capacity Magazine Average					10.0	11.8	21.8	75		
Non-Large Capacity Magazine Average					6.3	2.3	8.7	-		

Notes and Sources:

Data from Mother Jones ("US Mass Shootings, 1982-2017: Data from Mother Jones' Investigation," accessed June 1, 2017) and the Citizens Crime Commission of New York City ("Citizens Crime Commission of New York City, Mass Shooting Incidents in America (1984-2012)," accessed June 1, 2017). MJ indicates Mother Jones data. CC indicates Citizens Crime Commission of New York City data. If sources differ on data, "/" is added between values. In these instances, values from MJ are listed first. Except where noted, all data on shots fired obtained from CC.

¹ Large capacity magazines are those with a capacity to hold more than 10 rounds of ammunition.

² Offender(s) included in counts of fatalities and injuries.

^a Shots fired from: "Hate Crime is Suspected After Gunman Kills 3 White Men in Downtown Fresno," *LA Times*, April 19, 2017.

^b Shots fired from: "San Bernardino Suspects Left Trail of Clues, but No Clear Motive," *New York Times*, December 3, 2015.

^c Shots fired from: "Shooter Sets \$10,000 on Fire in Hialeah Shooting Rampage," *NBC News*, July 28, 2013.

^d Shots fired from: "Police Call Santa Monica Gunman 'Ready for Battle,'" *New York Times*, June 8, 2013.

Exhibit 1

MANAGING DIRECTOR

Education

YALE UNIVERSITY

M.Phil., Economics, 1990

M.A., Economics, 1989

M.B.A., 1986

STANFORD UNIVERSITY

A.B., Human Biology, 1981

Professional Experience

- 1994-Present **National Economic Research Associates, Inc.**
Managing Director. Responsible for economic analysis in the areas of securities, finance and environmental and tort economics.
Senior Vice President (2003-2016).
Vice President (1999-2003).
Senior Consultant (1994-1999).
- 1992-1993 **Council of Economic Advisers, Executive Office of the President**
Staff Economist. Provided economic analysis on regulatory and health care issues to Council Members and interagency groups. Shared responsibility for regulation and health care chapters of the *Economic Report of the President, 1993*. Working Group member of the President's National Health Care Reform Task Force.
- 1986-1988 **Ayers, Whitmore & Company (General Management Consultants)**
1983-1984 Senior Associate. Formulated marketing, organization, and overall business strategies including:
Plan to improve profitability of chemical process equipment manufacturer.
Merger analysis and integration plan of two equipment manufacturers.
Evaluation of Korean competition to a U.S. manufacturer.
Diagnostic survey for auto parts manufacturer on growth obstacles.
Marketing plan to increase international market share for major accounting firm.

Summer 1985 **WNET/Channel Thirteen, Strategic Planning Department**
Associate. Assisted in development of company's first long-term strategic plan. Analyzed relationship between programming and viewer support.

1981-1983 **Arthur Andersen & Company**
Consultant. Designed, programmed and installed management information systems. Participated in redesign/conversion of New York State's accounting system. Developed municipal bond fund management system, successfully marketed to brokers. Participated in President's Private Sector Survey on Cost Control (Grace Commission). Designed customized tracking and accounting system for shipping company.

Teaching

1989- 1992 **Teaching Fellow, Yale University**
Honors Econometrics
Intermediate Microeconomics
Competitive Strategies
Probability and Game Theory
Marketing Strategy
Economic Analysis

Publications, Speeches and Conference Papers

"Snapshot of Recent Trends in Asbestos Litigation: 2016 Update," (co-author), NERA Report, 2016.

"Economic Dimension and Societal Costs and Benefits of Banning Asbestos," presented at the World Health Organization, Regional Office for Europe conference, Assessing the Economic Costs of the Health Impacts of Environmental and Occupational Factors: The Economic Dimension of Asbestos, Bonn, Germany, 2016.

"Snapshot of Recent Trends in Asbestos Litigation: 2015 Update," (co-author), NERA Report, 2015.

Participant in panel on "Expert Reports and Depositions" at PLI Expert Witness 2014, hosted by the Practising Law Institute, New York, New York, 2014.

"Snapshot of Recent Trends in Asbestos Litigation: 2014 Update," (co-author), NERA Report, 2014.

"High Frequency Trading --A Primer in 1,800,000 Milliseconds" before the Litigation Group at Morrison Foerster, New York, New York, 2014.

"Snapshot of Recent Trends in Asbestos Litigation: 2013 Update," (co-author), NERA Report, 2013.

“Asbestos Payments per Resolved Claim Increased 75% in the Past Year – Is This Increase as Dramatic as it Sounds? Snapshot of Recent Trends in Asbestos Litigation: 2012 Update,” (co-author), NERA Report, 2012.

“Snapshot of Recent Trends in Asbestos Litigation: 2011 Update,” (co-author), NERA White Paper, 2011.

Participant in panel at The Implications of Matrixx, hosted by NERA Economic Consulting, New York, New York, 2011.

“2011 & Beyond–Predicting Mass Tort Litigation: with a Focus on Pharmaceutical Torts” presented at Emerging Insurance Coverage and Allocation Issues, hosted by Perrin Conferences, New York, New York, 2011.

Presented recent trends in settlements, predicting settlement amounts, and the use of economic analysis at mediation in the “Settlement Trends & Tactics” panel at Securities Litigation & Enforcement: Current Developments & Strategies, hosted by the New York City Bar, New York, New York, 2010.

“Snapshot of Recent Trends in Asbestos Litigation: 2010 Update,” (co-author), NERA White Paper, 2010.

“Settlement Trends and Tactics” presented at Securities Litigation During the Financial Crisis: Current Development & Strategies, hosted by the New York City Bar, New York, New York, 2009.

“GM and Chrysler Bankruptcies: Potential Impact on Other Asbestos Defendants” presented at Asbestos Litigation Conference: A Comprehensive National Overview and Outlook, hosted by Perrin Conferences, San Francisco, California, 2009.

“Snapshot of Recent Trends in Asbestos Litigation,” (co-author), NERA White Paper, 2009.

“Emerging Economies and Product Recall -- Are the Claims Coming?” presented at The International Reinsurance Summit 2008, Hamilton, Bermuda, 2008.

“China Product Recalls: What’s at Stake and What’s Next,” (co-author), NERA Working Paper, 2008.

“Recent Trends in Securities Litigation” presented at Strategies, Calculations & Insurance in Complex Business Litigation, hosted by the Directors Roundtable, New York, New York, 2008.

“The Current Landscape” presented at Mealey's Product Recall Liability Conference: Made in China and Beyond, Washington, DC, 2007.

“China Product Recalls: What's at Stake and What's Next” presented at China Product Recalls, sponsored by National Economic Research Associates, New York, New York, 2007.

“Damages and Loss Causation in Shareholder Class Actions after Dura” presented at Securities Litigation: Emerging Trends in Enforcement and Winning Litigation Strategies hosted by the International Quality & Productivity Center, New York, New York, 2006.

“Forecasting Product Liability by Understanding the Driving Forces,” (co-author), The International Comparative Legal Guide to Product Liability, 2006.

“Recent Trends in Securities Class Action Litigation,” presented at The Class Action Litigation Summit Program Class Action in the Securities Industry, Washington, D.C., 2003.

“Product Liability Claims Estimation – Four Steps, Four Myths” presented at Standard & Poor’s Seminar, New York, New York, 2001.

“How Bad Can It Be? The Economics of Damages and Settlements in Shareholder Class Actions,” Balancing Disclosure and Litigation Risks for Public Companies (Or Soon-To-Be Public Companies) Seminar, sponsored by Alston & Bird LLP and RR Donnelley Financial, Nashville, Tennessee, 2000.

“Securities Litigation Reform: Problems and Progress,” Viewpoint, November 1999, Issue No. 2 (co-authored).

“Trends in Securities Litigation and the Impact of the PSLRA,” Class Actions & Derivative Suits, American Bar Association Litigation Section, Vol. 9, No. 3, Summer 1999 (co-authored).

“Random Taxes, Random Claims,” Regulation, Winter 1997, pp. 6-7 (co-authored).

“Adverse Selection in the Market for Used Construction Equipment,” presented at the NBER Conference on Research in Income and Wealth, Federal Reserve Board, June 1992.

Expert Reports, Depositions & Testimony (4 years)

Expert Report before the United States District Court for the Southern District of Texas, Houston Division in *In re Willbros Group, Inc. Securities Litigation*, 2017.

Testimony, Deposition Testimony and Expert Report before the United States District Court for the Northern District of Texas, Dallas Division in *DEKA Investment GmbH, et al. v. Santander Consumer USA Holdings, Inc., et al.*, 2017.

Expert Report before the United States District Court for the Western District of Texas, Austin Division in *City of Pontiac General Employees' Retirement System v. Dell, Inc., et al.*, 2017.

Deposition Testimony and Expert Report before the United States District Court for the Southern District of Texas, Houston Division in *In re Cobalt International Energy Inc. Securities Litigation.*, 2017.

Deposition Testimony before the Superior Court of the State of North Carolina for Mecklenburg County in *Next Advisor, Inc. v. LendingTree, Inc.*, 2017

Deposition Testimony and Expert Report before the Supreme Court of the State of New York, County of New York in *Iroquois Master Fund Ltd., et al. v. Hyperdynamics Corporation*, 2016.

Deposition Testimony and Expert Report before the United States District Court for the Northern District of Texas, Dallas Division in *The Archdiocese of Milwaukee Supporting Fund, Inc., et al. v. Halliburton Company, et al.*, 2016.

Expert Report before the United States District Court for the Northern District of Georgia, Atlanta Division, in *In re Suntrust Banks, Inc. ERISA Litigation*, 2016.

Deposition Testimony and Expert Report before the Superior Court of New Jersey, Union County, in *Syngenta Crop Protection, Inc. v. Insurance Company of North America et al.*, 2015.

Declaration before the United States District Court Northern District of Georgia, in *John Noble, et al. v. Premiere Global Services, Inc., et al.*, 2015.

Deposition Testimony and Expert Report before the United States District Court Central District of California, in *Amanda Sateriale, et al. v. RJ Reynolds Tobacco Co. et al.*, 2015.

Rebuttal Report and Expert Report in the United States of America before the Securities and Exchange Commission in *Houston American Energy Corp., et al.*, 2014.

Testimony, Deposition Testimony and Expert Report before the United States District Court for the Northern District of Texas, Dallas Division in *The Archdiocese of Milwaukee Supporting Fund, Inc., et al. v. Halliburton Company, et al.*, 2014.

Deposition Testimony and Expert Report before the United States District Court for the Eastern District of Pennsylvania in *Power Restoration International, Inc. v. PepsiCo, Inc., Bottling Group, LLC, and Frito-Lay Trading Company (Europe), GmbH*, 2014.

Deposition Testimony and Expert Reports before the United States District Court Southern District of New York in *In re Lower Manhattan Disaster Site Litigation*, 2014.

Deposition Testimony and Expert Report before the United States District Court Southern District of Florida in *Atul Kumar Sood, et al. v. Catalyst Pharmaceutical Partners Inc., et al.*, 2014.

Declaration before the Superior Court of Gwinnett County State of Georgia in *City of Riviera Beach General Employees Retirement System, et al. v. Aaron's Inc., et al., Norfolk County Retirement System, et al. v. Aaron's Inc., et al.*, 2014.

Deposition Testimony, Surrebuttal Report and Expert Report before the United States District Court Middle District of Tennessee Nashville Division in *Garden City Employees' Retirement System and Central States, Southeast and Southwest Areas Pension Fund, et al. v. Psychiatric Solutions, Inc., et al.*, 2014.

Declaration before the United States District Court Northern District of California San Jose Division in *Fyock, et al. v. The City of Sunnyvale, et al.*, 2014.

Deposition Testimony and Expert Report before the United States District Court for the District of Maryland (Northern Division) in *Kolbe, et al. v. O'Malley, et al.*, 2014.

Declaration before the United States District Court Northern District of California in *San Francisco Veteran Police Officers Association, et al. v. The City and County of San Francisco, et al.*, 2014.

Testimony and Declaration before the United States Bankruptcy Court Southern District of New York in *In re Residential Capital, LLC, et al.*, 2013.

Deposition Testimony and Expert Report before the United States District Court for the Eastern District of Michigan Southern Division in *Timothy Hennigan, Aaron McHenry, and Christopher Cocks, et al. v. General Electric Company*, 2013.

Declaration before the United States District Court for the Western District of New York in *New York State Rifle and Pistol Association, Inc., et al. v. Cuomo, et al.*, 2013.

Expert Report before the United States District Court for the District of New Jersey in *Charles Stanziale, Jr. v. PepsiCo, Inc., et al.*, 2013.

Deposition Testimony before the United States District Court for the Southern District of New York, *In re Winstar Communications Securities Litigation*, 2013.

Supplemental Report before the United States District Court for the District of New Jersey in *Howmedica Osteonics Corp. v. Zimmer, Inc., et al.*, 2013.

Expert Report before the United States District Court of New Jersey in *Boris Goldenberg, et al. v. Indel, Inc., et al.*, 2013.

Deposition Testimony and Expert Report before the United States Court of Federal Claims in *Starr International Company, Inc. v. the United States of America*, 2013.

Expert Report before the Circuit Court for the County of Fairfax in *John DeGroot* as liquidating trustee for and on behalf of the *BearingPoint, Inc. Liquidating Trust v. F. Edwin Harbach, et al.*, 2013.