CRIME GUN TRACE REPORT | 2013 – 2018

CITY OF SEATTLE | OFFICE OF THE MAYOR

SEATTLE POLICE DEPARTMENT

July 2019

* The analyses presented in this report were completed by Anthony A. Braga, Ph.D., of the Center on Crime and Community Resilience at Northeastern University. This work was supported by funding from the Alliance for Gun Responsibility. Braga would like to thank Chief Carmen Best and Chief Strategy Officer Christopher Fisher of the Seattle Police Department, Renée Hopkins of the Alliance for Gun Responsibility, and Dr. Lisa M. Barao of Northeastern University for their assistance in completing the research presented in this report.

Introduction

The U.S. experiences more gun homicides than any other developed nation and was one of six countries that accounted for more than half of gun deaths worldwide between 1990 and 2016.[1] In 2017, there were nearly 11,000 gun homicide victims[2] and some 456,700 victims of nonfatal firearm crime in the U.S.[3] The U.S. gun homicide problem seems to be driven, in part, by the availability of guns to violent offenders rather than differences in the intention to kill held by violent offenders.[4] Fatal and non-fatal gun injuries could be reduced if firearms were less available to high-risk individuals.

The City of Seattle experiences relatively low levels of serious gun violence. Between 2013 and 2018, Seattle suffered 145 total homicides and only 19.3% (n = 28) were committed with firearms. However, in 2018, the Seattle Police Department (SPD) investigated 312 shots fired and shooting events.[5] SPD patrol officers recover hundreds of firearms each year in a variety of crimes ranging from fatal and non-fatal gun assaults to illegal gun possession offenses to robberies. Between 2013 and 2018, SPD officers recovered some 3,596 firearms from Seattle streets and residences. Clearly, Seattle has a problem with criminal access to firearms.

This report presents data on firearms recovered by the SPD and submitted to the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) for tracing. The report begins by describing the strengths and limits of using ATF firearms trace data to understand the sources of guns to high-risk individuals and criminal possessors in Seattle. It then describes gun recovery locations and circumstances, gun possessor characteristics, and the types of guns recovered and submitted for tracing by the SPD. For those recovered guns that were successfully traced to a first retail sale, the report presents purchaser characteristics, describes licensed dealers involved in these transactions, and considers variations in the time between traced guns' first retail sale and recovery by the SPD. The final section presents the policy implications of the analyses.

ATF Firearms Trace Data

The U.S. Gun Control Act of 1968 established requirements that allow a firearm to be traced from its manufacture or import to its first sale by a retail dealer.[6] Firearm tracing by ATF makes it possible, at least in principle, to determine the chain of commerce for a firearm from the point of import or manufacture to the first retail sale (and beyond, in states that maintain records of gun purchases). Unfortunately, not all firearms can be traced, and firearm trace data have some widely-recognized limits. For instance, these data may be limited by police decisions on which

[1] The Global Burden of Disease 2016 Injury Collaborators. (2018). Global mortality from firearms, 1990 – 2016. *Journal of the American Medical Association*, 320 (8): 792 – 814.
[2] https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017/tables/expanded-homicide-data-table-8.xls (accessed June 4, 2019).
[3] https://www.bjs.gov/content/pub/pdf/cv17.pdf (accessed June 4, 2019).
[4] Zimring, Franklin. (2008). *The Great American Crime Decline*. New York: Oxford University Press; Braga, Anthony A. and Philip J. Cook. (2018). The association of firearm caliber with likelihood of death from gunshot injury in criminal assaults. *Journal of the American Medical Association, Network Open*, 1(3): e180833.
[5] https://www.seattle.gov/police/information-and-data/2018-crime-report (accessed July 6, 2019)
[6] Cook, Philip J. and Anthony A. Braga. (2001). Comprehensive firearms tracing: Strategic and investigative uses of new data on firearms markets. *Arizona Law Review*, 43 (2): 277-309; Zimring, Franklin. (1975). Firearms and federal law: The Gun Control Act of 1968. *Journal of Legal Studies*, 4 (1): 133-198.

recovered guns to submit for tracing.[7] Firearms traces can also be unsuccessful for a variety of reasons, such as incorrect completion of the trace request form by local police, the firearm was too old to trace (pre-1968 manufacture), or the gun had obliterated serial numbers. Most importantly, ATF trace data cannot directly determine whether a recovered firearm was illegally diverted from lawful firearms commerce. Inferences on illegal gun diversion are made based on suspicious purchase and sales patterns.

Comprehensive tracing of all firearm recoveries reduces some of the bias in trace data introduced by police decision making. Jurisdictions that submit all confiscated guns for tracing can be confident that the resulting database of trace requests is representative of a well-defined "population" of guns recovered by police during a particular period of time and a reasonable "sample" of guns used in crime.[8] As such, ATF trace data can provide policy-relevant insights on illegal gun market dynamics when conclusions are based on careful analyses that are coupled with clear acknowledgments of the data limitations.[9]

SPD patrol officers, as described above, recovered some 3,596 firearms from Seattle streets and residences between 2013 and 2018. SPD policy mandates that the submission of all recovered firearms involved in crime or suspected of involvement in criminal activity to ATF for subsequent tracing. During this time period, the SPD submitted ATF trace requests for 2,581 recovered firearms (71.8% of 3,596 total gun recoveries). Since SPD does not trace all recovered guns, the results of the analyses below may be limited to an unknown degree by police decision making processes on what constitutes a crime gun. Nevertheless, the 2,581 firearms that were submitted for tracing comprise a large pool of seized firearms that provide policy-relevant insights on the pathways through which Seattle gun criminals acquire their firearms.

Table 1 presents the results of the ATF tracing process for the 2,581 firearms submitted by the SPD. Some 77.5% of the submitted guns (n = 2,000) were traced to the first known retail purchaser and included a valid first retail sale date. Nearly 15% of the submitted firearms were not successfully traced due to missing information in the firearms commerce records and slightly more than 2% of the trace requests were not successful due to varying information problems on the trace submission forms. The remainder of the unsuccessful traces were due to trace submissions on guns manufactured prior to the 1968 Gun Control Act (5%) and an inability to trace the firearm due to obliterated serial numbers (<1%). In the analyses presented in the remainder of the report, data were available on the type of firearm, caliber / gauge, manufacturer, model, recovery crime types, and possessor information for the 2,581 guns submitted for tracing. For the 2,000 successfully traced firearms, data were available on the retail dealer (FFL - federal firearms licensee), sale location, first retail purchaser, and sale date.

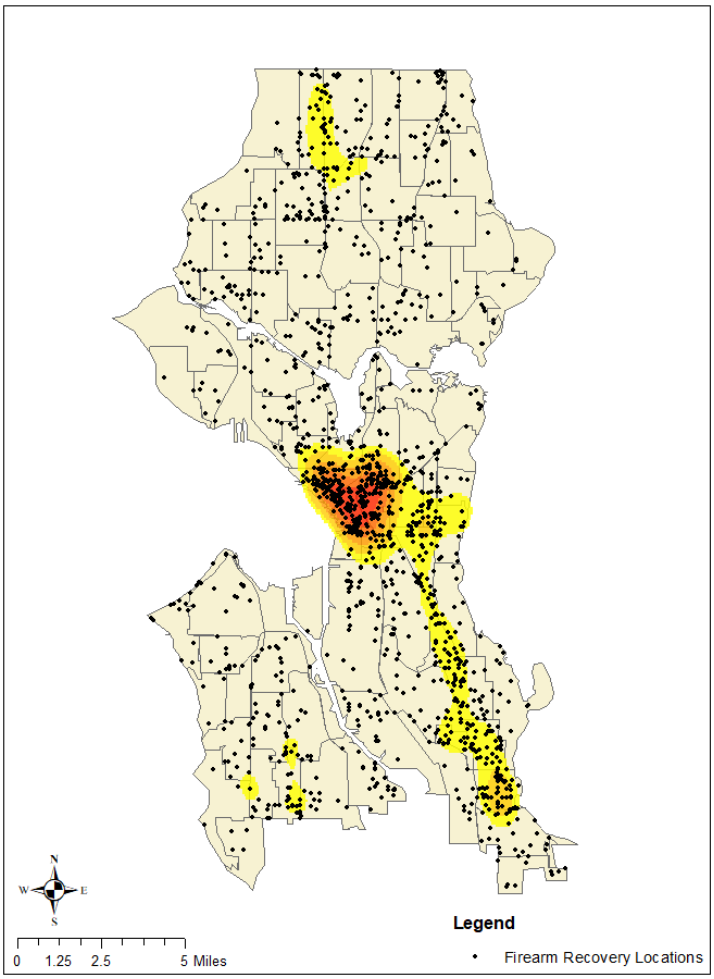
Table 1. Results of ATF tracing processes for firearms submitted by the SPD, 2013-2018

N=2,581

[7] Congressional Research Service. 1992. *"Assault Weapons": Military-Style Semi-Automatic Firearms Facts and Issues.* Report 92-434. Washington, DC: Library of Congress.
[8] Cook and Braga (2001).
[9] National Research Council. 2005. *Firearms and Violence: A Critical Review. Committee to Improve Research Information and Data on Firearms.* Washington, DC: The National Academies Press.

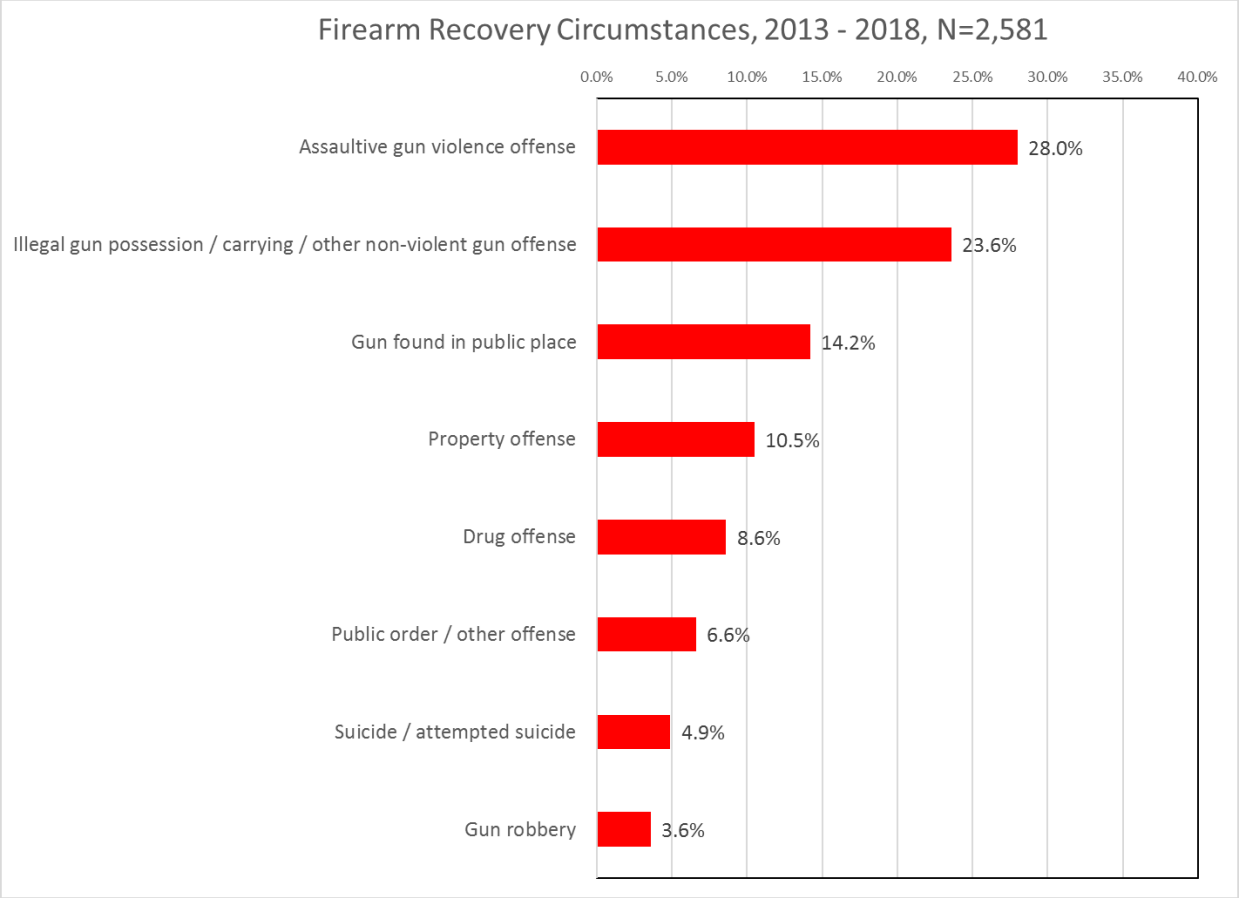
Trace Results	Number	Percent
Traced to first retail purchaser	2,000	77.5%
Not traced due to problem with commerce records	379	14.7%
Not traced due to pre-1968 manufacture	130	5.0%
Not traced due to problem with trace form	56	2.2%
Not traced due to obliterated serial numbers	16	0.6%

Figure 1. Recovery locations for SPD firearms submitted for tracing, 2013-2018



Characteristics of SPD Firearms Submitted for Tracing and Crime Gun Possessors

Figure 1 presents the recovery locations for the 2,581 firearms recovered by the SPD and submitted to ATF for tracing.[10] As the map reveals, the SPD recovered crime guns throughout the city. However, crime guns tend to be recovered in particular neighborhoods. Between 2013 and 2018, the top 5 neighborhoods for crime gun recoveries were: 1) Broadway (97 guns), 2) Belltown (90 guns), 3) Columbia City (89 guns), 4) First Hill (81 guns), and 5) Central Business District (80 guns). Figure 2 presents recovery circumstances for the 2,581 SPD crime guns. Assaultive gun violence (includes attempted and completed homicides, aggravated assaults, and sex assaults) was the most frequent general crime circumstances associated with the recoveries (28.0%). Illegal gun possession, illegal gun carrying, and other non-violent gun offenses represented the second most frequent category of gun recovery circumstances (23.6%). Slightly more than 14% of recovered crime guns were found by SPD officers in public places.



[10]A total of 2,365 guns were successfully geocoded to X-Y coordinates (91.6%). Unfortunately, 186 guns did not include a specific recovery address and were not geocoded.

Figure 2 presents the types of firearms recovered by SPD and submitted to ATF for tracing. Different kinds of handguns represented some 80 percent of recovered crime guns. This includes semiautomatic pistols (64.5%), revolvers (15.7%), and derringers (0.7%). Long guns represented roughly 19 percent of the recovered crime guns with rifles and shotguns accounting for 12.1 and 7.3% of the 2,581 crime guns, respectively. Table 2 presents the top calibers / gauges and manufacturers of handguns and long guns. Higher-powered calibers (.357 magnum, .40, .44 magnum, and .45) accounted for nearly 29 percent of recovered handguns while medium-powered calibers (.38, .380, and 9mm) characterized nearly 54 percent of recovered handguns. Recovered handguns were generally made by reputable manufacturers such as Glock, Smith & Wesson, and Ruger. For long guns, 12 gauge shotguns (30.9%) and .22 rifles (19.4%) were most frequently recovered. Most long guns were made by reputable manufacturers (e.g., Remington, Mossberg, and Winchester). Few recovered firearms were of low-quality manufacture (e.g., HS Produkt / IM and Kel-Tec CNC handguns, North China Industries rifles).

Figure 2.

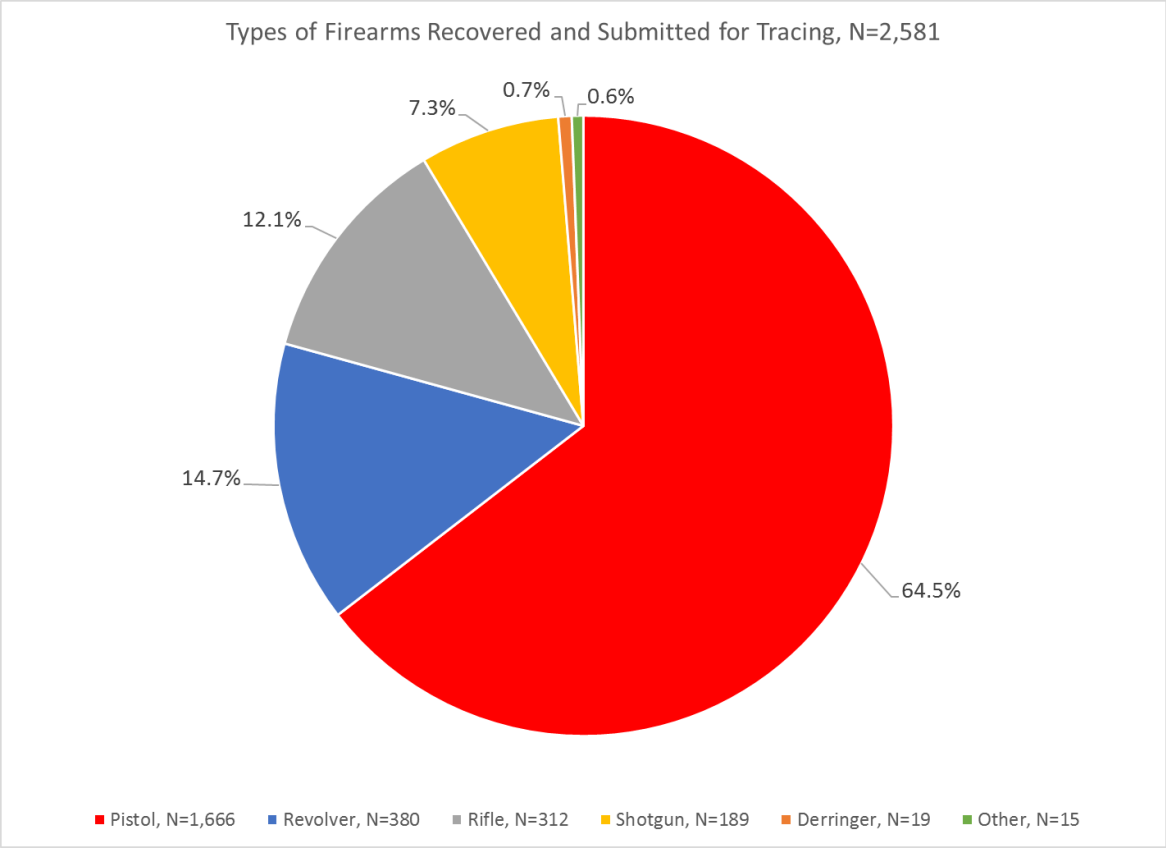


Table 2. Top calibers / gauges and manufacturers of recovered crime guns

Top 10 handgun calibers

N=2,065 (80.0% of 2,581 total guns)

Caliber	N	Percent
9mm	694	33.6%
.40	272	13.2%
.380	240	11.6%
.45	225	10.9%
.22	211	10.2%
.38	179	8.7%
.357	74	3.6%
.25	52	2.5%
.32	50	2.4%
.44	20	1.0%
Other	48	2.3%

Top 10 rifle calibers / shotgun gauges

N = 501 (19.4% of 2,581 total guns)

Caliber/Gauge	N	Percent
12 gauge	155	30.9%
.22	97	19.4%
7.62	59	11.8%
5.56	29	5.8%
.223	29	5.8%
20 gauge	22	4.4%
.30-06	19	3.8%
.30	12	2.4%
.308	10	2.0%
.30-30	8	1.6%
Other	61	12.2%

Top 10 handgun manufacturers

N=2,065 (80.0% of 2,581 total guns)

Manufacturer	N	Percent
Glock	319	15.4%
Smith & Wesson	300	14.5%
Sturm Ruger	185	9.0%
Taurus	123	6.0%
HS Produkt / IM	116	5.6%
Colt	80	3.9%
S.I.G.	80	3.9%
Beretta	62	3.0%
Walther	56	2.7%
Kel-Tec CNC	42	2.0%
Other	702	34.0%

Top 10 rifle / shotgun manufacturers

N = 501 (19.4% of 2,581 total guns)

Manufacturer	N	Percent
Remington	68	13.6%
Mossberg	56	11.2%
Winchester	41	8.2%
Sturm Ruger	30	6.0%
Savage Arms	27	5.4%
Marlin	25	5.0%
North China Indus.	19	3.8%
Maverick Arms	16	3.2%
Russian	13	2.6%
US Military Surplus	13	2.6%
Other	216	43.1%

There were 1,104 recovered guns that were submitted for tracing by the SPD that were associated with a known gun possessor (42.8% of 2,581 total guns). Table 3 presents the sex, race, and age of these known gun possessors. A strong majority of identified crime gun possessors were male (90%) and these gun possessors were more likely to be reported as white (44.5%) rather than black (30.9%). It is worth noting here that the available information did not accurately distinguish between Hispanic and non-Hispanic gun possessors. Crime gun possessors were generally young, with a mean age of 36 years. Some 45 percent were aged 30 or younger.

Table 3. Social characteristics of known gun possessors

N=1,104

Characteristics		Number	Percent
Sex			
	Male	993	90.0%
	Female	94	8.5%
	Unknown	17	1.5%
Race			
	White	491	44.5%
	Black	341	30.9%
	Asian	78	7.0%
	Other	20	1.8%
	Unknown	174	15.8%
Age			
	17 and younger	39	3.5%
	18 – 24	255	23.1%
	25 – 30	199	18.0%
	31 – 35	156	14.1%
	36 – 45	172	15.6%
	46 – 60	175	15.9%
	61 and older	86	7.8%
	Unknown	22	2.0%
	Mean	36.0 years	
	Median	31 years	
	Range	13 – 98 years	

Sources States and Licensed Dealers for Crime Guns Traced to First Retail Purchasers

Most recovered crime guns originated from first retail sales at licensed dealers in Washington State. As Table 4 reveals, nearly 78 percent (n = 1, 577) of the 2,000 crime guns traced to a first retail sale and with a valid sales date were sold at Washington FFLs. Licensed dealers in other states accounted for roughly 22 percent (n = 433) of traced crime guns with FFLs in the nearby states Oregon, California, and Alaska producing the highest numbers of guns first sold to out-of-state purchasers. Figure 3 presents a map of the Seattle crime guns first sold at specific FFL locations across the United States.[11]

Research in California suggests that specific FFLs can be frequent sources of crime guns recovered by the police; what is more, these California retailers were linked to more guns traced by ATF than would be expected from their overall volume of gun sales.[12] In this study, a similar pattern emerged for specific Washington State FFLs. Unfortunately, annual gun sales volume was not available for Washington FFLs. Regardless, it is important to note that do not suggest that the FFLs identified in this study were involved in criminal or inappropriate transfers of guns. The data presented in Table 5 and elsewhere in this report simply document that specific numbers of crime guns recovered by the SPD were traced to first retail sales at these FFLs.

Table 4. FFL source states for SPD crime guns successfully traced to first retail purchase

N=2,000

Top 10 FFL source states	Number	Percent
Washington	1,557	77.9%
Oregon	77	3.9%
California	56	2.8%
Alaska	29	1.5%
Texas	23	1.2%
Arizona	19	1.0%
Idaho	17	0.9%
Montana	15	0.8%
Georgia	15	0.8%
Florida (tie)	14	0.7%
Colorado (tie)	14	0.7%
Other states	144	7.2%

[11] For the 2,000 crime guns traced to a first retail purchaser and with a valid sales date, the FFL business locations for 1,968 (98.4%) were geocoded to X-Y coordinates.

[12] There could be many reasons for these patterns, see Wintemute, Garen J., Philip J. Cook, and Mona Wright. (2005). Risk factors among handgun retailers for frequent and disproportionate sales of guns used in violent and firearm related crimes. *Injury Prevention*, 11 (6): 357-363.

Figure 3.

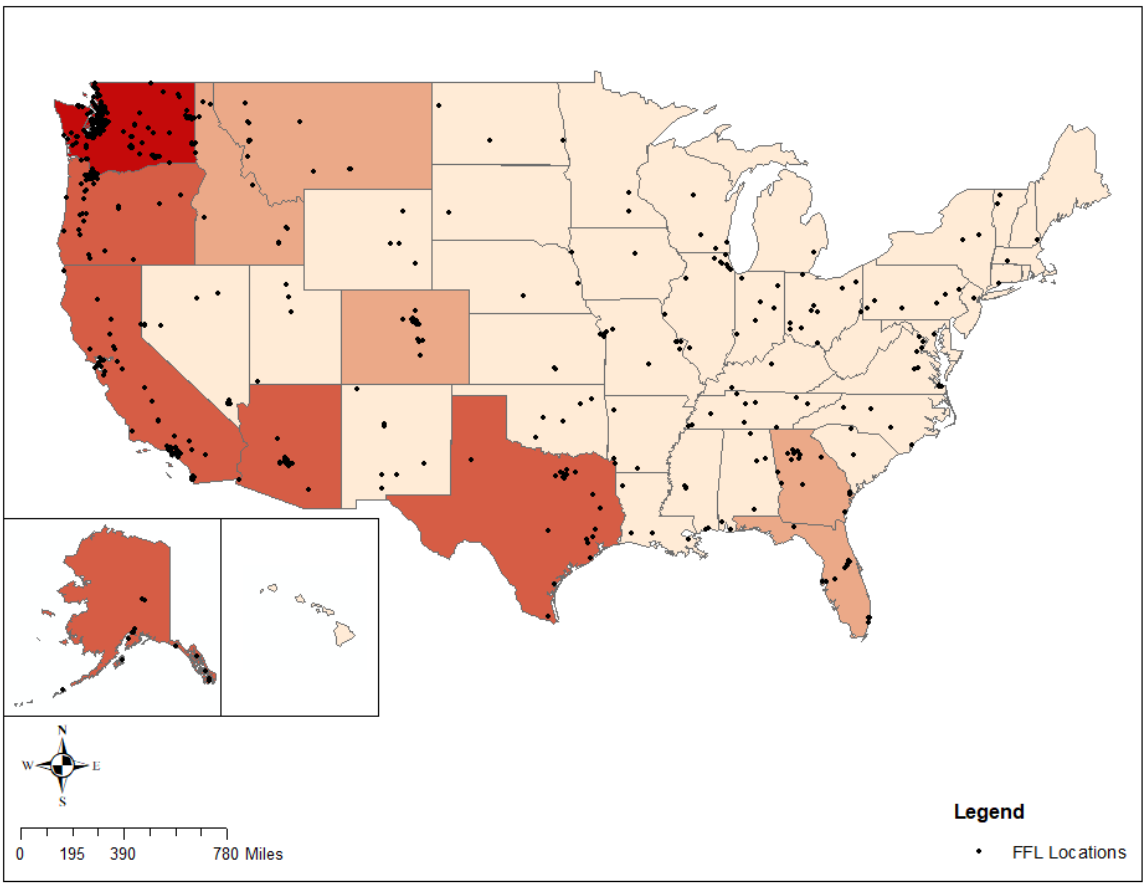


Table 5 presents the top 25 Washington State FFLs that were associated with the first retail sale of traced crime guns recovered and submitted for tracing by the SPD between 2013 and 2018. Some 437 distinct Washington State FFLs were involved in at least one retail sale of a gun that ended up recovered in crime by the SPD. However, only 5.7% of the Washington State FFLs with at least one recovered gun traced to a first purchaser with a valid sales date (25 of 437 total FFLs) accounted for more than half of the traced guns originating in Washington (787, 50.5% of 1,557).

Figure 4 presents a map of Washington FFL business locations and highlights the locations of the top 10 FFLs. The FFL that was associated with the most traced crime guns was an unnamed pawnshop located at 1005 S. 2nd Street in Renton, Washington (n = 130). The top 25 gun retailers represented a mix of businesses that held active (A) and inactive (I) FFLs at the time the recovered crime gun was traced by ATF. Two of the FFLs in the Top 25 – Federal Way Discount Guns (1401 S 324 St.; 33120 Pacific Hwy S Suite 2), Wade's Eastside Gun Shop (13590 Bel Red Rd.; 13570 Bel Red Rd.) – seemed to be the same licensed dealers that held active and inactive FFLs associated with different addresses during the study time period.

Table 5. Top 25 Washington State licensed dealers associated with traced crime guns

N=1,557 from 437 distinct FFLs

Washington State FFLs	Number	Percent
Pawnshop – 1005 S. 2nd St., Renton (A)	130	8.3%
Federal Way Discount Guns, Federal Way* (A)	62	4.0%
Outdoor Emporium, Seattle (A)	56	3.6%
Discount Gun Sales LLC, Seattle (I)	52	3.3%
Cabela's 037, Tulalip (A)	35	2.2%
West Coast Armory, Bellevue (A)	33	2.1%
Discount Gun Sales LLC, Tukwila (I)	32	2.1%
Federal Way Discount Guns, Federal Way* (I)	32	2.1%
Butch's Discount Guns, Seattle (I)	31	2.0%
Wade's Eastside Gun Shop, Bellevue* (I)	30	1.9%
Butch's Gun Shop, Seattle (I)	30	1.9%
Cabela's 026, Lacey (A)	29	1.9%
Wade's Eastside Gun Shop, Bellevue* (I)	24	1.5%
Lowpriceguns.com, Bellevue (A)	24	1.5%
Discount Gun Sales, LLC, Kirkland (I)	22	1.4%
Mary's Pistols, Tacoma (A)	21	1.3%
Beararms.com, Kent (A)	18	1.1%
Kesselring Gun Shop Inc, Burlington (I)	18	1.1%
Lynnwood Gun & Ammunition, Lynnwood (A)	17	1.1%
Welchers Gun Shop Inc, Tacoma (A)	17	1.1%
Jaffes Jewelry & Loans, Seattle (I)	17	1.1%
Ft Lewis Main Exchange, Ft Lewis (A)	16	1.0%
The Marksman, Puyallup (A)	15	0.9%
Top Guns Inc, Shoreline (A)	15	0.9%
Central Gun Exchange (I)	14	0.9%
Other 412 Washington State FFLs	770	49.5%

* = Possible same business
(A) = Active FFL
(I) = Inactive FFL

Figure 4.

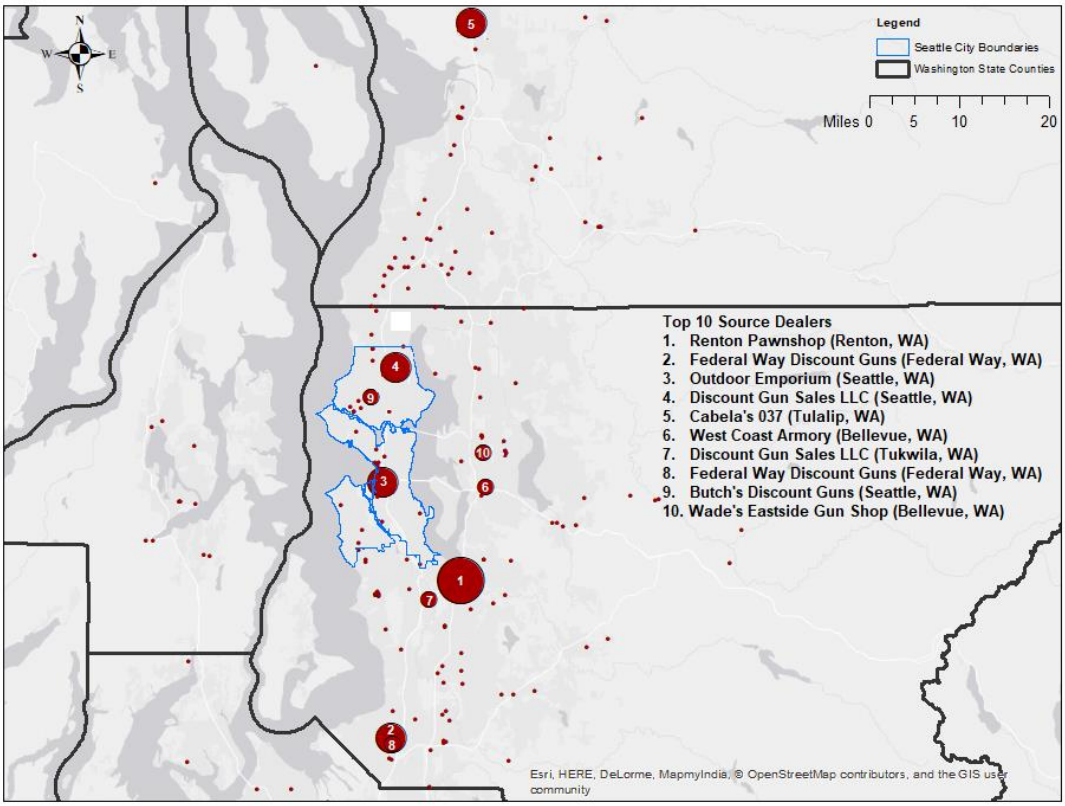


Table 6 presents the top out-of-state FFLs that were associated with the first retail sale of traced crime guns recovered and submitted for tracing by the SPD between 2013 and 2018. Some 396 distinct out-of-state FFLs were involved in at least one retail sale of a gun that ended up recovered in crime by the SPD. The top out-of-state FFL associated with recovered crime guns was Keith's Sporting Goods in Gresham, Oregon. This retailer seemed to have two FFLs during the study time period associated with two different addresses (1595 E Powell Blvd.; 95 NE Victory). Keith's Sporting Goods active FFL was associated with 7 crime gun traces and the inactive FFL was associated with another 5 crime gun traces. Similar to the Washington State FFLs, the top gun retailers represented a mix of businesses that held active (A) and inactive (I) FFLs at the time the recovered crime gun was traced by ATF.

Table 6. Top out-of-state licensed dealers associated with traced crime guns

N=433 from 396 distinct FFLs

Top out-of-state FFLs	Number	Percent
Keith's Sporting Goods, Gresham, OR (A)*	7	1.6%
The Gun Broker Inc, Clackamas, OR (I)	6	1.4%
Keith's Sporting Goods, Gresham, OR (I)*	5	1.2%
Three Bears Guns, Portland, OR (I)	4	0.9%
NFA Investments, Beaverton, OR (A)	2	0.5%
Kmart #4288, Portland, OR (I)	2	0.5%
Cent-Wise Sporting Goods, Redmond, OR (I)	2	0.5%
Tricorp Inc, Salem, OR (I)	2	0.5%
Good Guys Guns, Medford, OR (A)	2	0.5%
The Traders, San Leandro, CA (I)	2	0.5%
F Morton Pitt Co., San Gabriel, CA (I)	2	0.5%
Longs Drugs #103, Anchorage, AK (I)	2	0.5%
Tucson Guns & Western Artifacts, Tucson, AZ (A)	2	0.5%
Tri State Outfitters, Moscow, ID (A)	2	0.5%
Cabela's 025, Post Falls, ID (A)	2	0.5%
Bob Ward & Sons Inc, Missoula, MT (A)	2	0.5%
Valley Guns, Harlingen, TX (I)	2	0.5%
B&M Firearms, Shawnee, OK (I)	2	0.5%
Cabela's Wholesale 810, Triadelphia, WV (A)	2	0.5%
Vance Outdoors Inc, Columbus, OH (I)	2	0.5%
Larry's, Huntsville, AL (I)	2	0.5%
Crossroad Sports, Casselberry, FL (I)	2	0.5%
Dealer ID being researched	2	0.5%
Other 373 Out-of-State FFLs	373	85.7%

* = Possible same business
(A) = Active FFL
(I) = Inactive FFL

First Retail Purchasers of Crime Guns Recovered and Traced by the SPD

The social characteristics of first retail gun purchasers were broadly similar to the social characteristics of crime gun possessors. Guns were marginally more likely to be first purchased by females and whites relative to the profile of crime gun possessors. Table 7 presents the sex, race, and age of the purchasers of recovered crime guns successfully traced to a first retail sale. Many of identified first retail purchasers were male (80.5%) and more than two-thirds (67.8%) were white. Once again, the available information did not accurately distinguish between Hispanic and non-Hispanic gun purchasers. First retail purchasers were generally young, with a mean age of 36.5 years. Some 37.6 percent were aged 30 or younger.

Table 7. Social characteristics of first retail purchasers of traced crime guns

N=2,000

Characteristics		Number	Percent
Sex			
	Male	1,611	80.5%
	Female	239	12.0%
	Unknown	150	7.5%
Race			
	White	1,356	67.8%
	Black	280	14.0%
	Asian	125	6.3%
	Other	110	5.5%
	Unknown	129	6.4%
Age			
	18 – 24	351	17.5%
	25 – 30	401	20.1%
	31 – 35	221	11.1%
	36 – 45	331	16.6%
	46 – 60	308	15.4%
	61 and older	125	6.3%
	Unknown	263	13.0%
	Mean	36.5 years	
	Median	32.5 years	
	Range	18 – 83 years	

Most of the identified first retail purchasers of traced crime guns were associated with only one traced firearm. As Table 8 reveals, 95.3 percent of the 1,840 unique first purchasers of the 2,000 traced crime guns were connected to only one traced gun. The 87 purchasers of multiple traced crime guns represented only 4.7% of 1,840 purchasers of guns in the database but accounted for 12.3% (247) of 2,000 traced crime guns.

Table 9 compares the identities of the first retail purchasers with the identities of the possessors (when known) of crime guns when recovered by the SPD. Only 12.0 percent of the traced crime guns were recovered in the possession of the first retail purchaser. Some 56.5% of the traced crime guns were recovered without a known possessor and 31.5% were recovered in the possession of someone who was not the first retail purchasers. Taken as a whole, the vast majority of traced Seattle crime guns were recovered in the hands of someone other than the first retail purchaser (88.0%), suggesting that at some point in their lifespan these guns were likely transferred from a legal owner to a criminal possessor.

Table 8. Number of purchasers associated with multiple crime guns

N=1,840

Number of traced crime guns	Number of Purchasers	Percent
1 gun	1,753	95.3%
2 guns	57	3.1%
3 guns	14	0.8%
4 guns	9	0.5%
5 guns or more	7	0.3%

Table 9. Association between crime possessors and first retail purchasers

N = 2,000

Purchaser and possessor association	Number	Percent
No possessor associated with gun	1,130	56.5%
Purchaser and possessor were different people	630	31.5%
Purchaser and possessor were the same people	240	12.0%

Time-to-Crime of Guns Recovered and Traced to First Retail Purchasers

Research on illegal gun markets suggest that new guns are recovered disproportionately in crime.[13] Analyses of ATF firearms trace data typically focus on a critical dimension of the illegal firearms market: "time-to-crime," the time between a firearm's first sale at retail and its subsequent recovery by a law enforcement agency.[14] Law enforcement considers a traced firearm with short time-to-crime, defined as recovery within 3 years of first retail sale, as possibly having been illegally diverted from a retail outlet.[15] The median time-to-crime for traced crime guns was 5.5 years, indicating that roughly half of traced crime guns had a time-to-crime that was shorter than 5.5 years. As Figure 5 and Table 10 reveal, roughly 36 percent of traced crime guns were recovered by the SPD within 3 years or less of the first retail sale. Some 16.7% of traced crime guns were recovered by the SPD within 1 year or less of the first retail sale. Indeed, many Seattle crime guns moved quickly from legal commerce into criminal hands.

Figure 5. Firearms successfully traced to first retail purchaser, time-to-crime cumulative percent distribution up to 20 years old, N=2,000

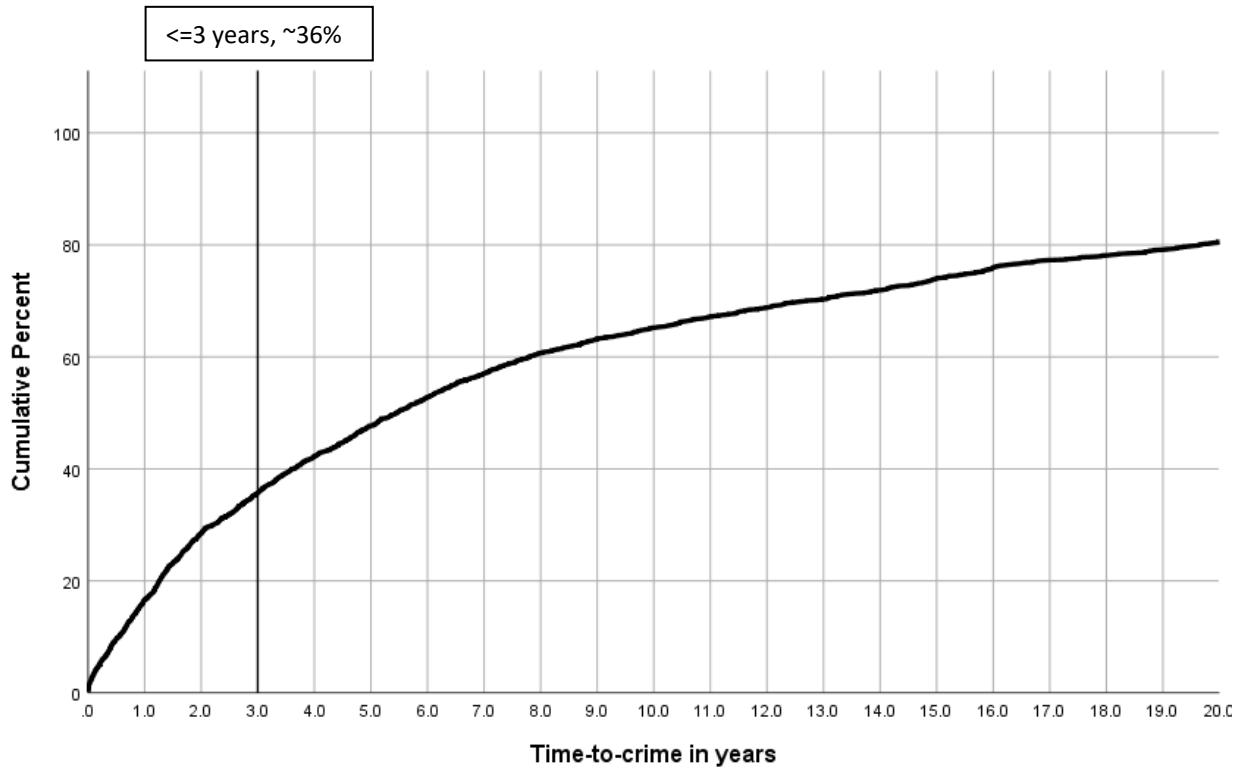


Table 10. Time-to-crime of crime guns traced to first retail purchaser

[13] Braga, Anthony A., Garen J. Wintemute, Glenn L. Pierce, Philip J. Cook, and Greg Ridgeway. (2012). Interpreting the empirical evidence on illegal gun market dynamics. *Journal of Urban Health*, 89 (5): 779-793.
[14] Pierce, Glenn L., Anthony A. Braga, Raymond R. Hyatt, and Christopher S. Koper. (2004). The characteristics and dynamics of illegal firearms markets: Implications for a supply-side enforcement strategy. *Justice Quarterly*, 21 (2): 391–422.
[15] Cook and Braga (2001).

N = 2,000

Time-to-crime categories	Number	Percent
1 year or less	334	16.7%
>1 year and <=3 years	381	19.1%
>3 years and <=6 years	342	17.1%
>6 years and <=10 years	249	12.5%
>10 years and <=20 years	307	15.3%
20 years or older	387	19.3%

Median time-to-crime	5.5 years
Mean time-to-crime	10.1 years (Standard deviation =11.2)

Table 11 presents time-to-crime metrics for traced crime guns with varying characteristics. Handguns tended to be recovered in crime more quickly than rifles and shotguns. Crime guns traced to first purchasers associated with 2 or more crime guns have a quicker time-to-crime when compared to crime guns traced to first purchasers associated with only on crime gun. When the purchaser and the possessor were the same person, these crime guns tended to move from retail sale to use in crime more rapidly than guns not recovered from the first retail purchaser. Indeed, two-thirds of traced crime guns recovered from first purchasers were seized by SPD officers within 3 years of the first retail sale.

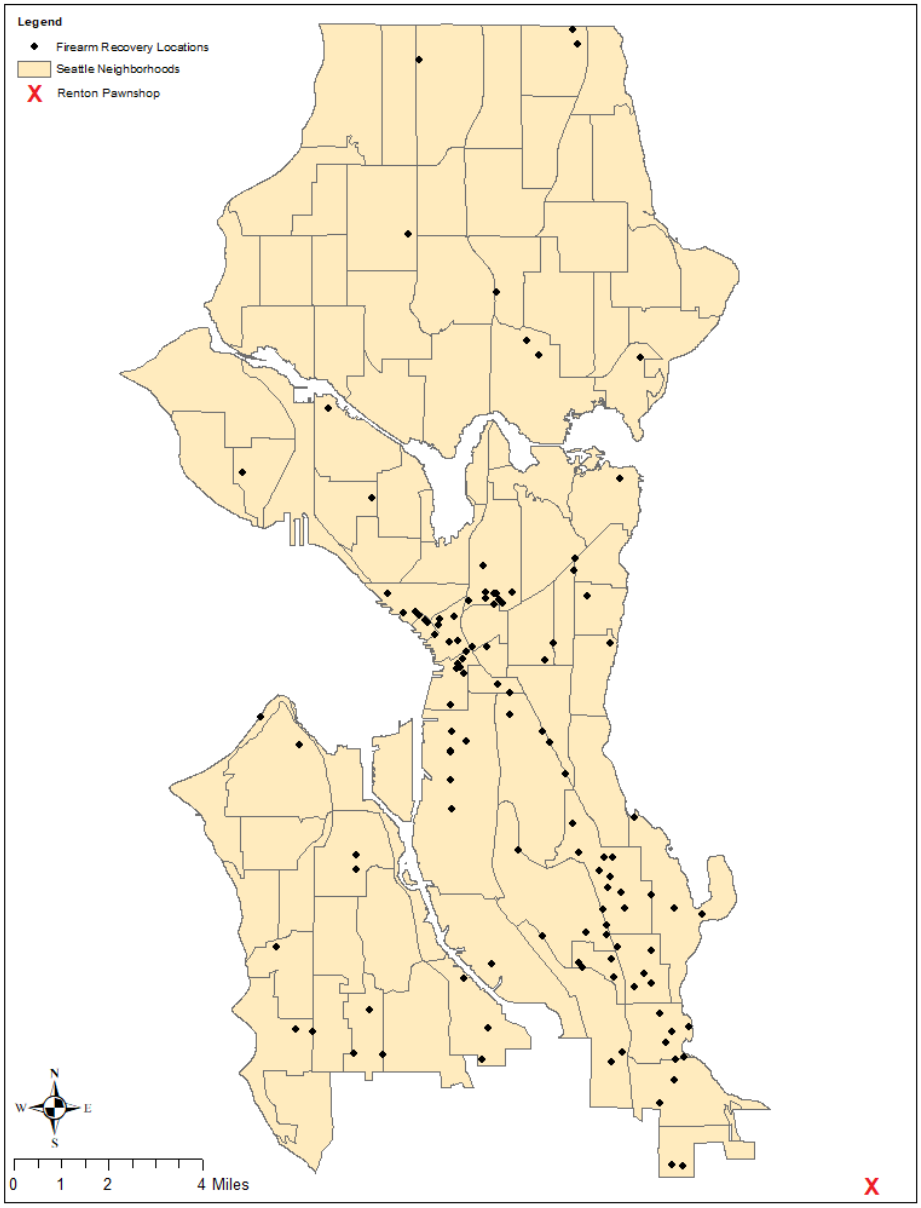
Table 11. Time-to-crime for guns traced to first retail purchaser by selected characteristics

	Median	% <=1 year	% <=3 years
Handguns	5 years	17.2%	36.5%
Long guns	7.5 years	14.4%	31.9%
Purchaser associated with 1 gun	6 years	15.6%	33.9%
Purchaser associated with 2 or more guns	3 years	24.6%	48.8%
Purchaser and possessor were the same	1.5 years	42.1%	66.7%
Purchaser is not the possessor	6 years	13.2%	31.5%
Washington FFL	4.5 years	20.0%	41.3%
Out-of-state FFL	13 years	5.0%	15.8%
Washington FFLs with 50+ crime guns			
Renton Pawnshop	1.5 years	38.5%	60.0%
Federal Way Discount Guns	3.5 years	21.3%	43.6%
Outdoor Emporium, Seattle	1.5 years	42.9%	82.1%
Discount Gun Sales LLC, Seattle	3 years	23.1%	50.0%

Finally, traced crime guns first purchased at Washington State FFLs were recovered from crime more rapidly than crime guns first purchased at out-of-state dealers. Time-to-crime figures were

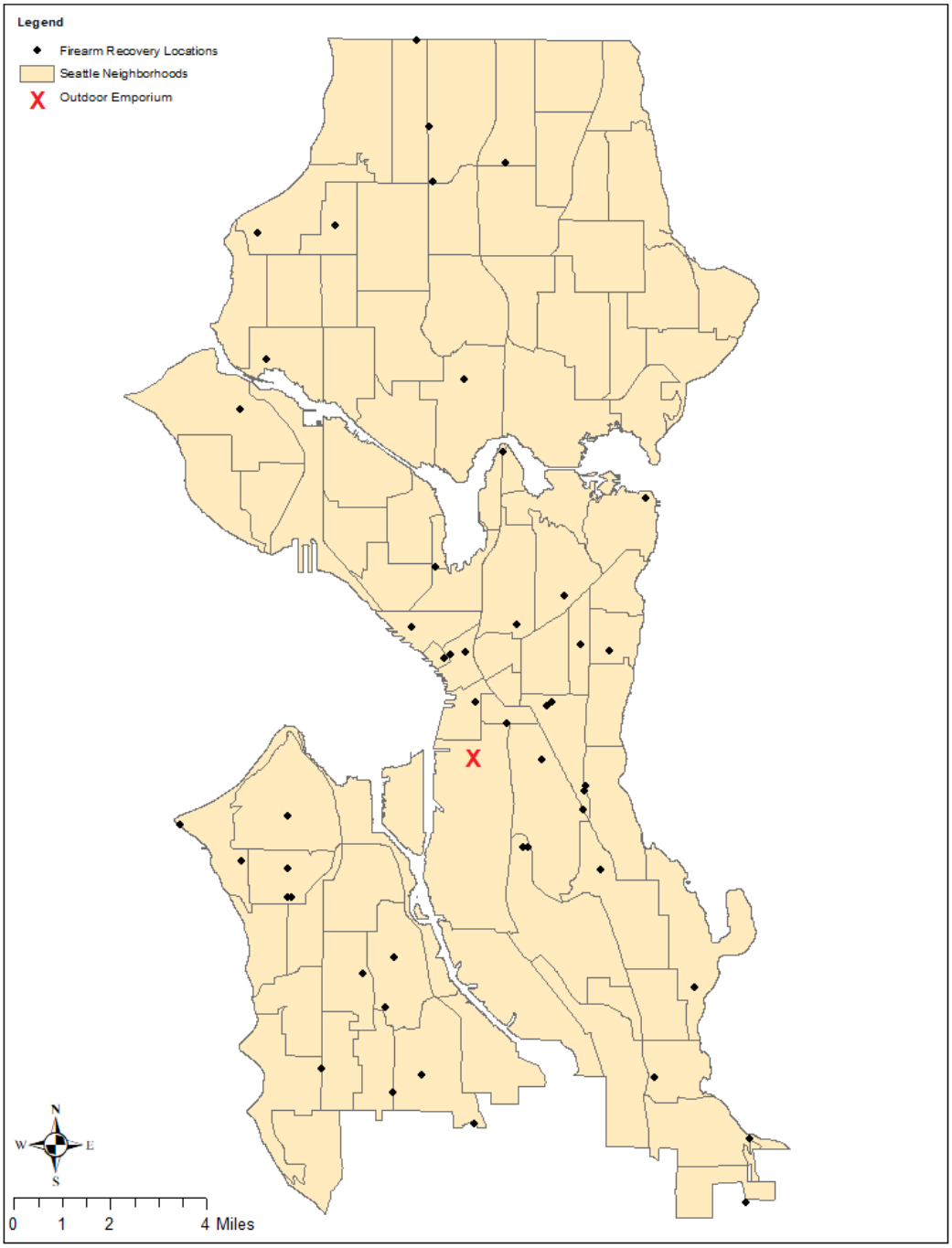
particularly short for crime guns traced to Washington FFLs associated with 50 or more crime gun traces. It is noteworthy that half of the 130 crime guns traced to the Renton pawnshop FFL were recovered by SPD within 1.5 years of their first retail sale and some 60 percent were recovered within 3 years of their first retail sale. Figure 6 presents the recovery locations of crime guns originating from first retail sales at the Renton pawnshop.

Figure 6.



A similar pattern is evident with the 56 crime guns traced to the Outdoor Emporium located in Seattle. For these crime guns, the median time-to-crime was recovery by SPD within 1.5 years of the first retail sale. Some 82.1 percent of guns traced to the Outdoor Emporium were recovered within 3 years of their first retail sale. Figure 7 presents the recovery locations of crime guns originating from first retail sales at the Outdoor Emporium FFL.

Figure 7.



Policy Implications of Study Findings

Seattle is generally a safe city, but it does have an ongoing problem with criminal access to firearms. SPD patrol officers recovered 3,596 firearms between 2013 and 2018. The SPD submitted 2,581 (~72%) of these firearms to ATF for tracing based on established and suspected involvement in crime. Firearms submitted for tracing were associated with a variety of violent and non-violent offenses. Slightly more than 80 percent of all firearms submitted for tracing were handguns and 83 percent of these handguns fired medium (.38, .380, and 9mm) or large (.357 magnum, .40, .44 magnum, and .45) caliber bullets. Nearly 78 percent of submitted firearms were traced to a first retail purchase with a valid sales date. More than three-fourths of traced firearms were first sold at an in-state Washington State FFL with the remainder sold at out-of-state FFLs often in nearby states such as Oregon, California, and Alaska. A relatively small number of in-state FFLs were associated with larger numbers of traced crime guns and these crime guns tended to change ownership at least once and move rapidly from retail sales to recovery by SPD in crime. These findings suggest several new avenues for gun violence prevention policy and practice in Washington State.

It is commendable that the SPD has a mandatory policy of submitting all recovered guns involved in crime or suspected of involvement in crime to ATF for subsequent tracing. However, it is noteworthy that patrol officers recovered more than 1,000 additional guns between 2013 and 2018 that were not traced. Comprehensive tracing of all recovered firearms removes police decision-making bias from the analysis of the sources of gun recoveries in a particular jurisdiction and strengthens the certainty of conclusions from firearms trace data analyses. Submitting all recovered guns for tracing would also facilitate impact evaluations of recent legislative and policy changes such as the 2014 law requiring universal background checks for gun sales in Washington State[16] and the 2015 City of Seattle law mandating the reporting of lost and stolen guns.[17]

The analyses presented in this report show that in-state retail firearm purchases followed by subsequent ownership transfers characterize a large share of Seattle traced crime guns. Unregulated secondary firearms markets, sometimes called the private-party or informal gun markets, have long been recognized as a leading source of guns used in crimes.[18] The 2014 Washington State universal background check law mandates that private buyers and sellers conduct their firearms transactions through licensed dealers. FFLs process these private transactions in compliance with all federal and state gun transfers, including the mandatory criminal background check on the purchaser. Importantly, these regulated transactions generate documentation of private firearms transfers. These data could be used to identify suspicious purchase and sales patterns in secondary firearms markets, suggestive of straw purchasing and other forms of illegal diversion, for focused law enforcement attention. However, the passage of strong private transfer gun laws needs to be accompanied by investments in the vigorous enforcement of reporting requirements and strategic analyses of the resulting data.[19]

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[16] Wash. Rev. Code Ann. § 9.41.010

[17] Seattle Municipal Code 10.78.010

[18] Philip J. Cook, Stephanie Molliconi, and Thomas. (1995). Regulating gun markets. *Journal of Criminal Law and Criminology*, 86 (1): 59–92; Wintemute, Garen J., Anthony A. Braga, and David M. Kennedy. 2010. Private-party gun sales, regulation, and public safety. *New England Journal of Medicine*, 363 (6): 508 – 513.

[19] Braga, Anthony A. and David M. Hureau. (2015). Strong gun laws are not enough: The need for improved enforcement of secondhand gun transfer laws in Massachusetts. *Preventive Medicine*, 79 (1): 37 – 42

The analyses also show that a relatively small number of federally-licensed gun dealers are associated with larger numbers of SPD crime gun recoveries. While these results do not directly or indirectly indicate that the FFLs identified here committed any illegal transactions, the concentration of crime gun traces to specific dealers suggests further opportunities to restrict the flow of close-to-retail diversion of guns to criminals. These analyses can be helpful in pinpointing specific targets for closer regulation and investigation. In-state FFLs are required to have a valid Washington gun dealer license that mandates employee background checks and requires dealers to advise gun purchasers to store their guns safely.[20] Beyond the maximum of one federal inspection by ATF per year, Washington FFLs could be subjected to further state inspections to ensure that dealers are not making false statements on gun transfer paperwork, selling firearms "off the books," facilitating transfers to prohibited persons, and other violations.

Theft remains an established source of guns to criminals in Seattle and elsewhere. In 2018, Washington FFLs reported 136 stolen firearms to ATF.[21] Analyses of 2016 National Crime Information Center stolen gun data suggests that Washington State residents report higher gun theft rates than several other states.[22] However, research on criminal access to firearms suggests that prohibited persons acquire guns through multiple sources including illegal diversions from legitimate firearms commerce.[23] In some cities, such as Chicago, the available research evidence suggests that gun criminals only acquire a small fraction of their illegal guns through theft.[24] Continued analysis of ATF firearms trace data, SPD and NCIC stolen gun data, and other crime gun information resources could provide further strategic and investigative insights to address both illicit diversions from legal firearms commerce and firearms theft problems. These information products could be used to good effect by the SPD, ATF, US Attorney's Office, Washington State Attorney General's Office, and King County Prosecutor's Office to disrupt supply lines of guns to criminals. Reducing violent gun injuries in Seattle will require a blended portfolio of gun control policy interventions.

[20] Wash. Rev. Code Ann. § 9.41.110.
[21] https://www.atf.gov/file/133371/download (accessed July 6, 2019).
[22] The general findings suggest Washington residents report gun thefts at a rate of between 40 and 80 per 100,000 residents. This rate was higher than states such as California, Illinois, Massachusetts, and New York; comparable to nearby Oregon and Idaho; but much lower than states such as Alabama, Georgia, and South Carolina. https://www.thetrace.org/features/stolen-guns-violent-crime-america/ (accessed June 6, 2019).
[23] Braga et al. (2012); Braga, Anthony A., Philip J. Cook, David M. Kennedy, and Mark H. Moore. 2002. The illegal supply of firearms. *Crime and Justice: A Review of Research*, 29: 319 – 352.
[24] Philip J. Cook. (2018). Gun theft and crime. *Journal of Urban Health*, 95 (3): 305-312.