

The Regional Transportation Safety Picture

Deaths, Injuries & Crashes

Briefing to the Citizens Advisory Committee
May 14, 2015
By Marco Trigueros, COG/TPB staff

Regional Transportation Safety Planning

- ▶ Transportation Safety Subcommittee
 - Information Exchange
 - Identify opportunities for coordination and collaborative planning for safety aspects of the region's transportation systems
- ▶ Safety data compilation and analysis
- ▶ Coordinate with other TPB committees on the integration of safety considerations
- ▶ Maintain Safety Element of region's long-range transportation plan
- ▶ Transportation Safety Planning is becoming a higher priority for the TPB
 - Safety data influenced the Regional Priorities Plan

Safety Element of the Long-Range Transportation Plan

- ▶ A Federal requirement
- ▶ A regional look at Transportation Safety
 - Transportation Planning Board Member Jurisdictions
 - Incorporates common Safety Emphasis areas in the DC, MD, and VA Strategic Highway Safety Plans (SHSPs)
- ▶ We will update the Safety Element this year



Emphasis Areas from Most Recent State Strategic Highway Safety Plans

Emphasis Areas	DC	MD	VA
Aggressive Drivers (speed)	x	x	x
Occupant Protection (seat belts)	x	x	x
Impaired Drivers (alcohol or drugs)	x	x	x
Driver Competence	x		
Young Drivers	x		x
Senior Drivers	x		
Trucks and Buses	x		
Motorcycle Operators	x		
Pedestrian and Bicyclist Safety	x	x	
Intersection Safety	x	x	x
Roadway Departures	x	x	x
Work Zone Safety	x	x	
Traffic Records	x		x
Distracted Driving	x	x	
Emergency Response Systems	x		
Hazardous Locations	x	x	
Head-On Collisions	x		

Emphasis Areas in Common

1. Impaired Driving
2. Speeding & Aggressive Driving
3. Occupant Protection (seatbelts)
4. Run off the Road
5. Intersections
6. Information and Decision Support Systems (Traffic Records)

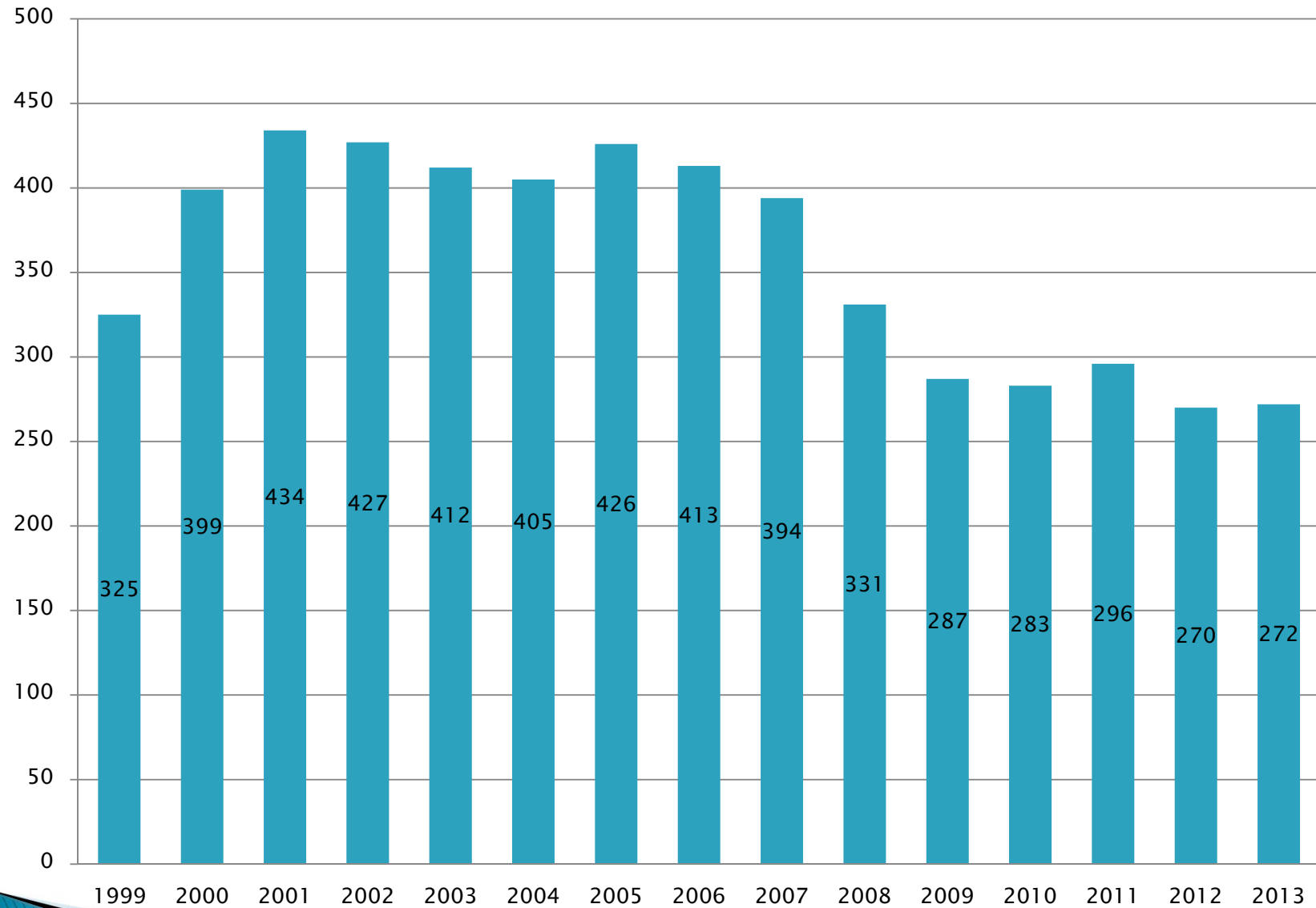


Traffic Fatalities in the Washington Region

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total	Average
District of Columbia	41	52	71	50	68	45	49	41	54	39	33	25	32	19	29	619	43
Charles County	26	30	21	27	20	16	40	30	23	14	15	18	22	15	16	317	22
Frederick County	32	27	37	18	18	28	33	33	25	21	23	24	15	16	20	350	25
Montgomery County	49	60	60	67	52	79	44	58	49	52	40	48	40	37	41	735	52
Prince George's County	79	102	128	141	122	121	134	111	126	129	98	87	105	87	87	1570	110
Arlington County	8	14	9	12	9	6	9	3	6	8	5	5	6	4	2	104	7
City of Alexandria	4	5	5	6	3	3	2	1	5	3	1	3	3	4	3	48	3
Fairfax County	49	70	53	64	61	63	61	67	53	29	37	36	44	45	40	732	51
City of Fairfax	0	0	1	1	3	0	2	3	2	0	2	0	2	5	2	21	2
City of Falls Church	0	1	1	1	1	0	0	0	0	0	1	2	0	0	0	7	0
Loudoun County	11	9	15	16	24	22	20	19	21	11	13	12	11	18	13	222	16
City of Manassas	1	2	2	1	1	0	3	1	3	1	3	0	0	1	0	19	1
City of Manassas Park	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0
Prince William County	24	27	31	23	30	22	29	46	27	24	16	23	15	19	19	356	25
Total Washington	325	399	434	427	412	405	426	413	394	331	287	283	296	270	272	5374	358

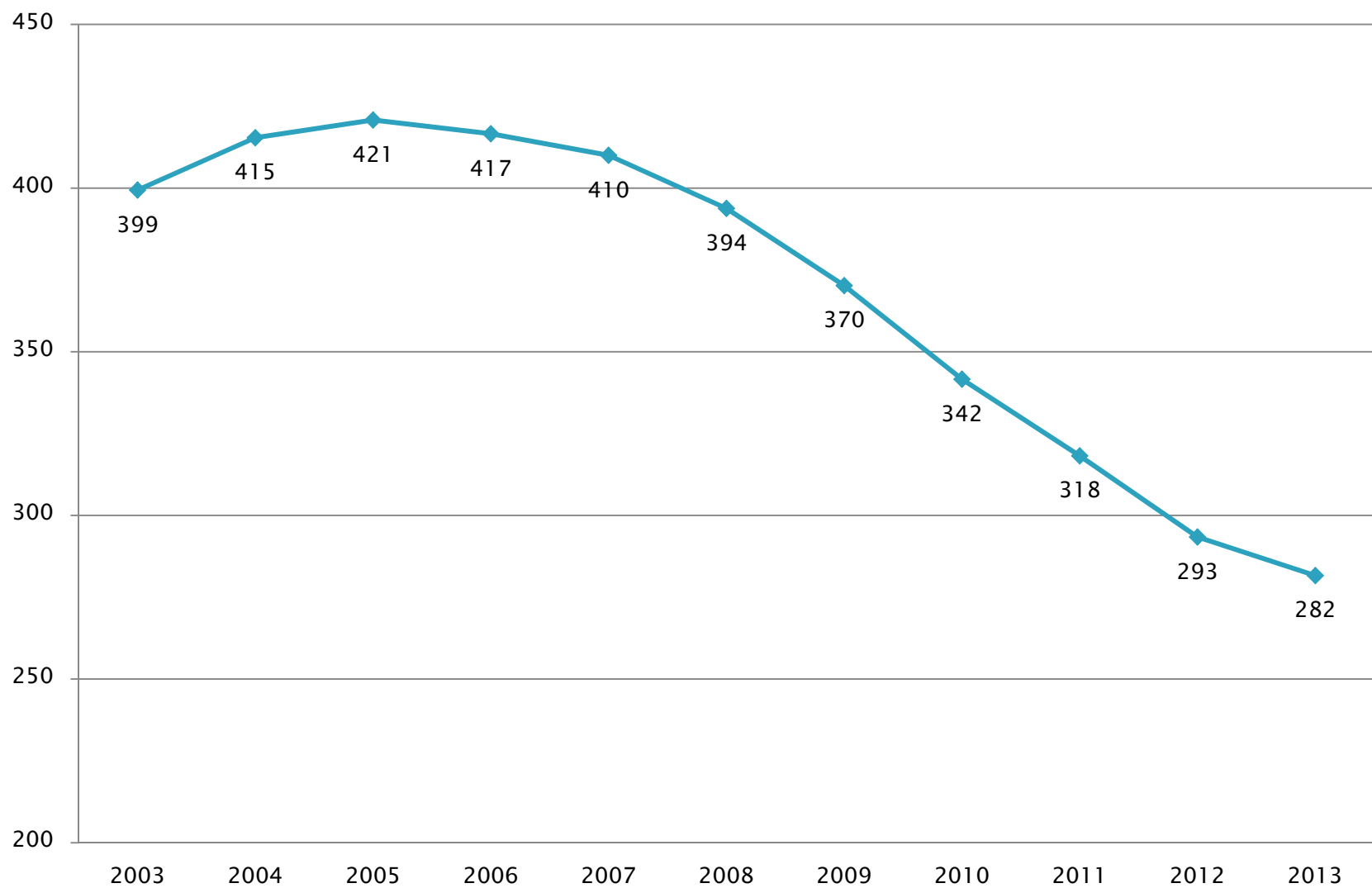
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Total Fatalities



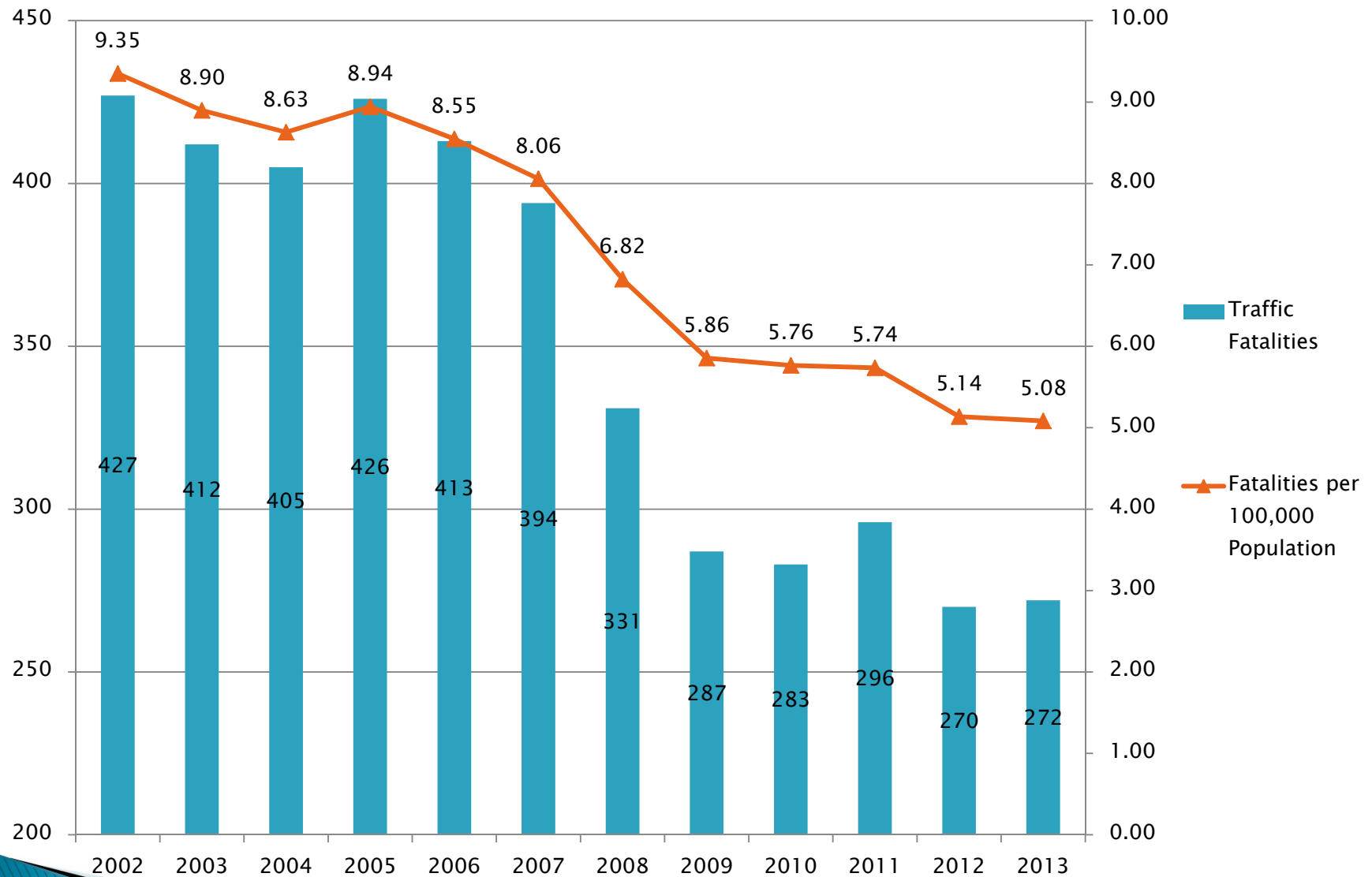
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Total Fatalities 5-Year Average



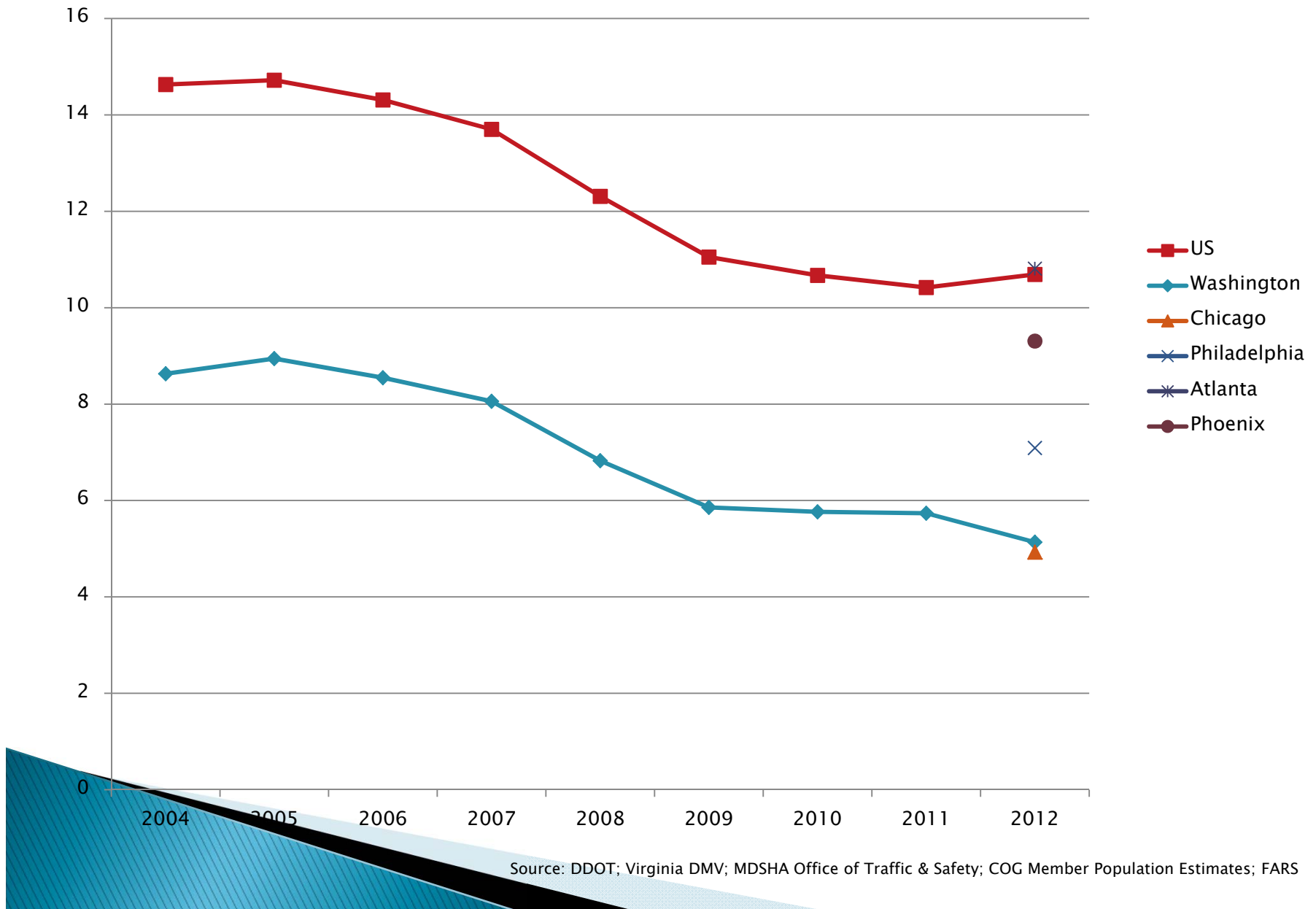
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Traffic Fatalities per 100,000 Population in the Washington Region

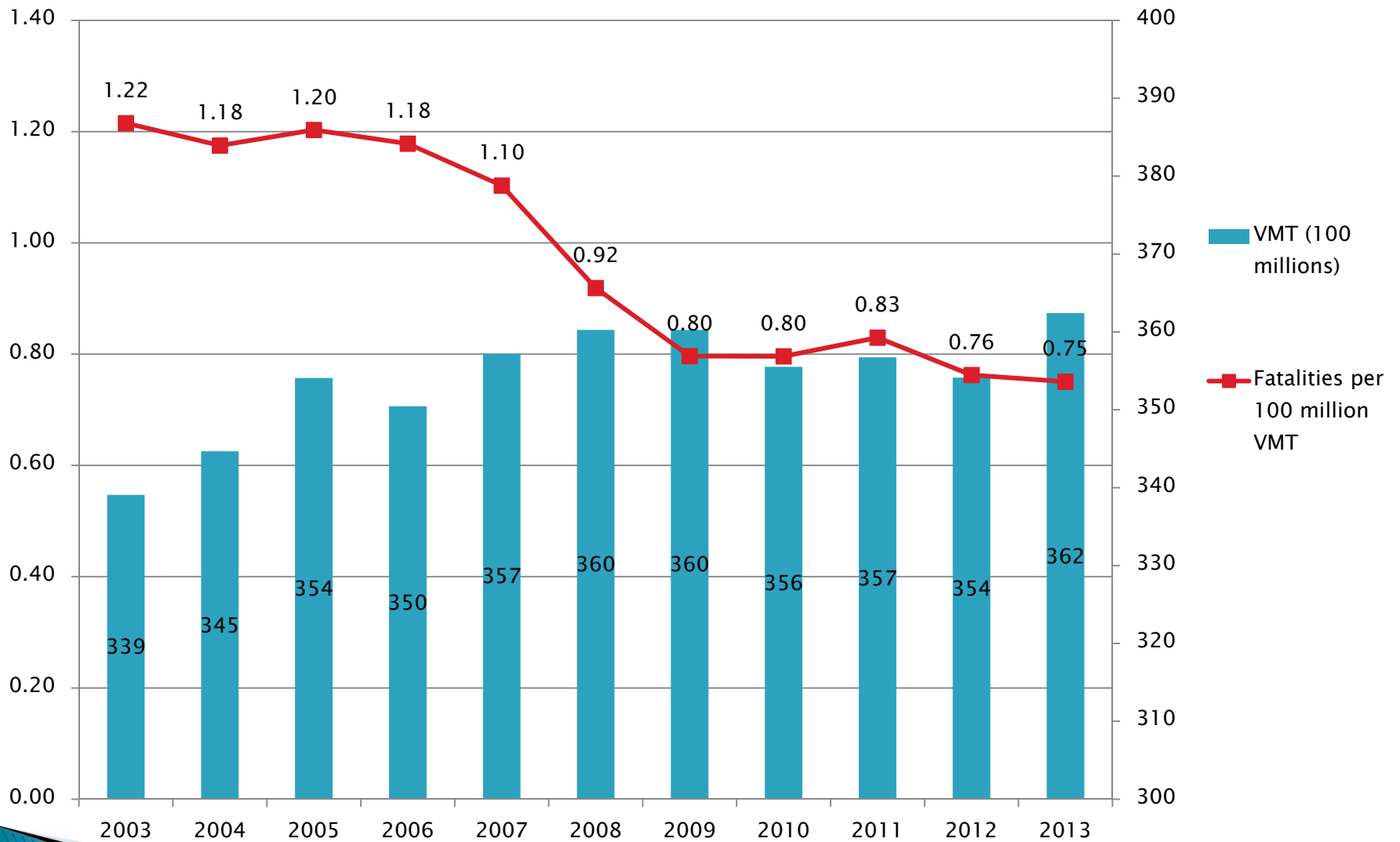


Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety; COG Member Population Estimates

Fatality Rate per 100 Thousand Population

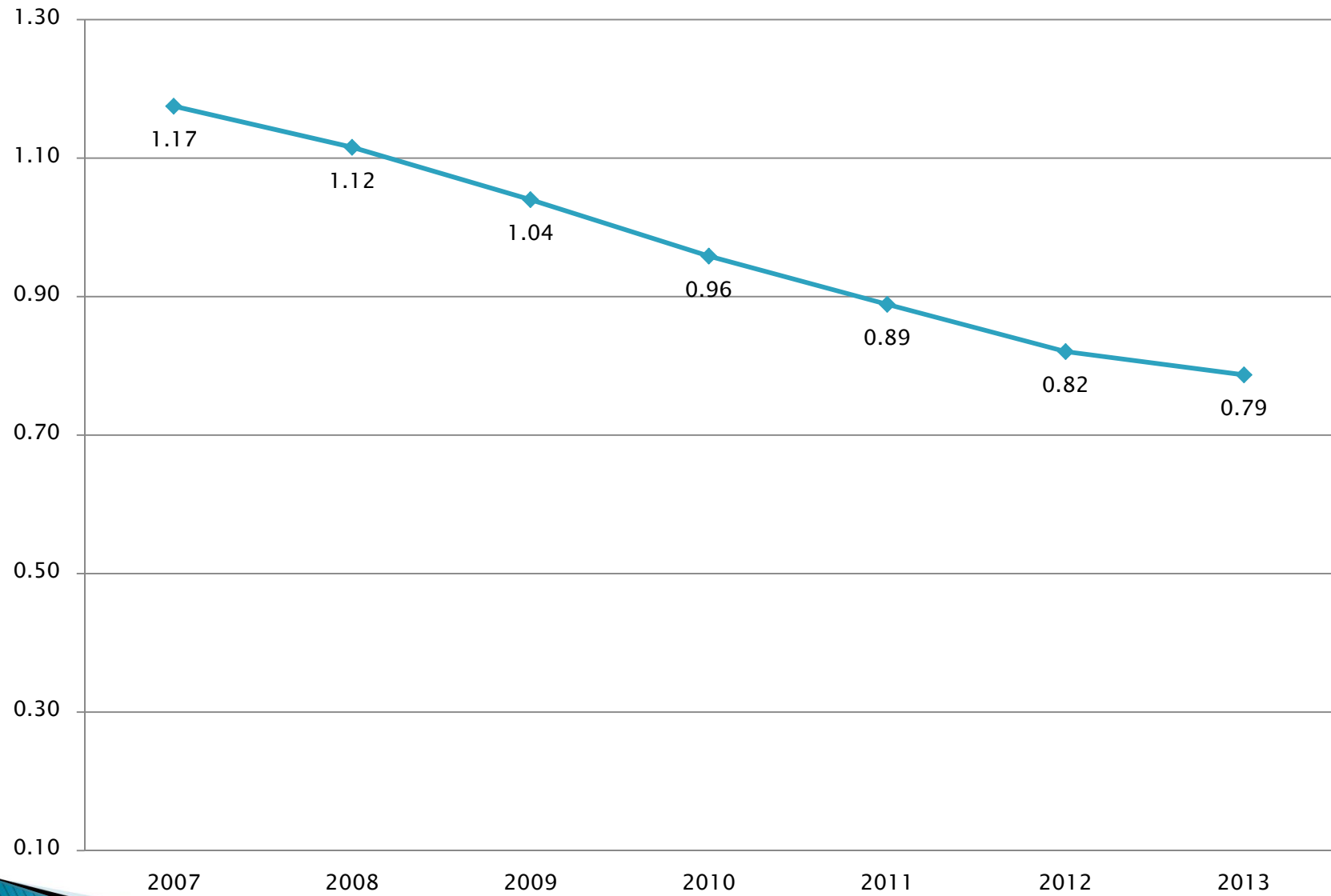


Fatality Rate per 100 Million VMT for the Washington Metropolitan Statistical Area



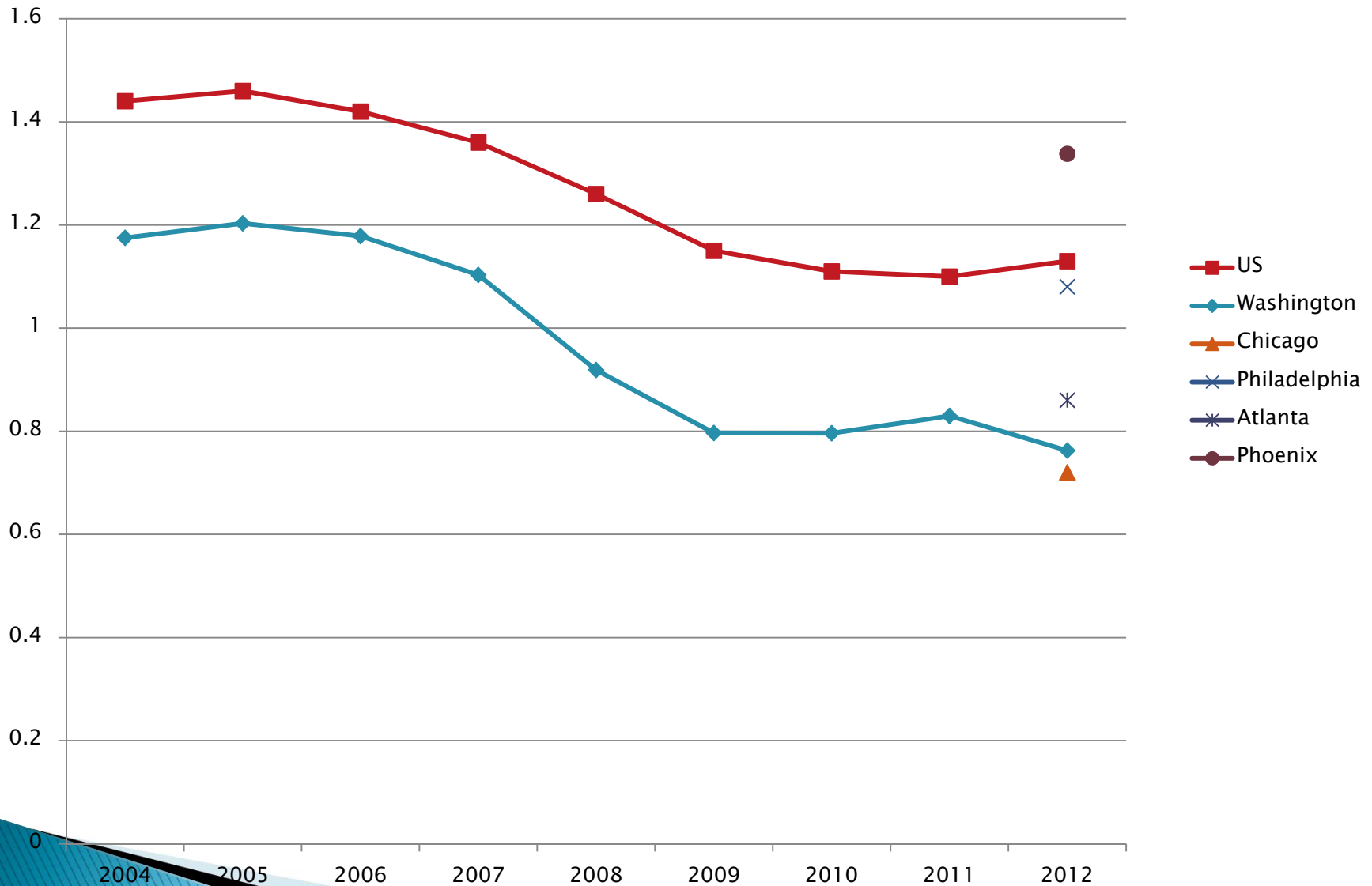
Source: Bureau of Transportation Statistics; 2009 data unavailable

Fatalities per 100 Million VMT 5-Year Average



Source: Bureau of Transportation Statistics; 2009 data unavailable

Fatality Rate per 100 Million Vehicle Miles Traveled



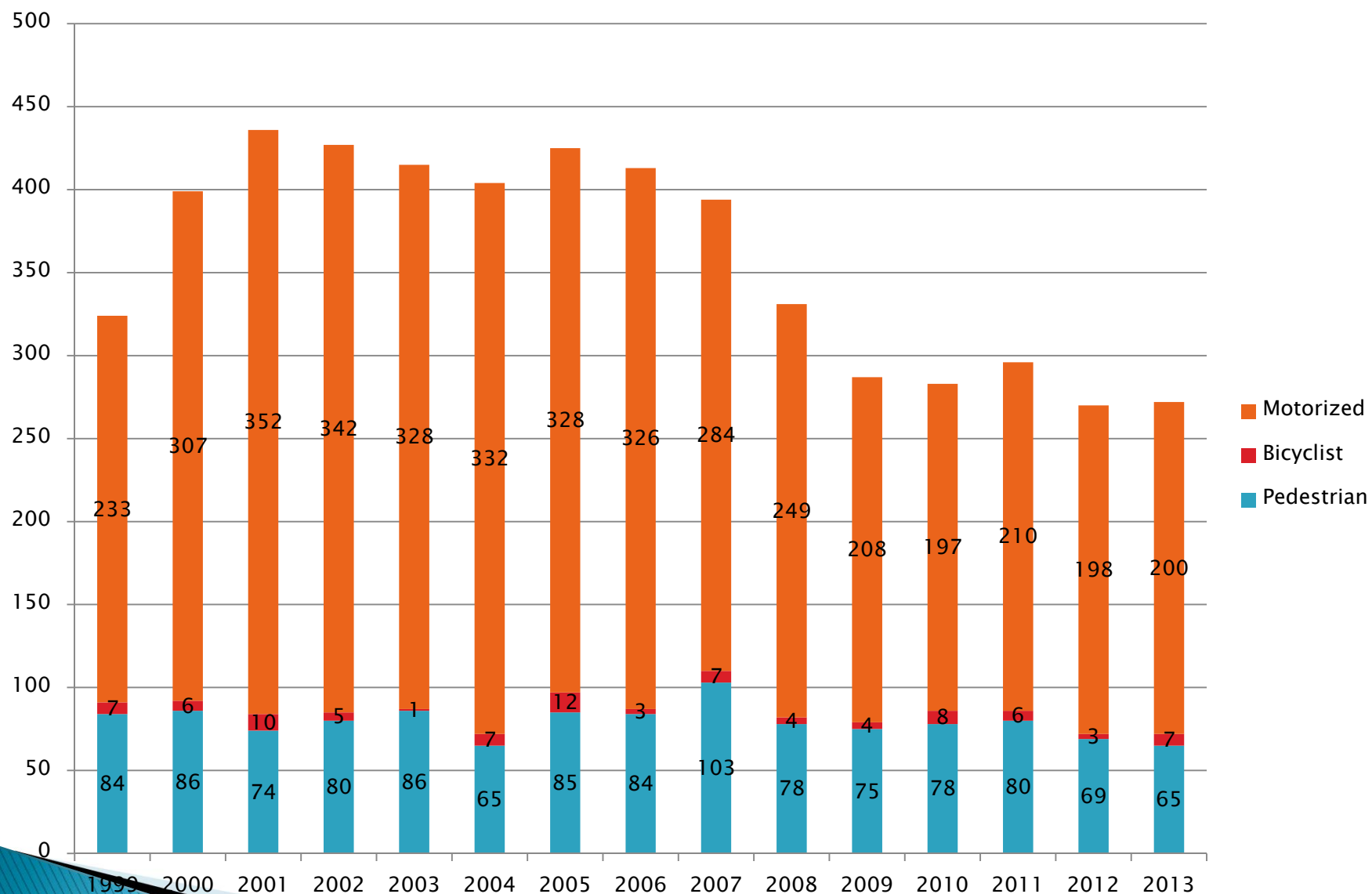
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety; COG Member Population Estimates; FARS

Pedestrian and Bicyclist Fatalities

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total	Average
District of Columbia	18	20	15	9	18	14	19	17	27	15	16	16	13	8	14	239	16
Charles County	6	3	2	5	3	1	6	2	6	1	3	3	9	4	3	57	4
Frederick County	6	4	0	2	4	2	2	4	1	0	1	3	0	4	5	38	3
Montgomery County	20	17	11	16	12	15	11	15	17	16	12	15	10	8	14	208	14
Prince George's County	19	16	30	28	30	19	35	19	29	39	23	23	32	24	18	384	26
Arlington County	2	5	4	2	3	2	3	1	1	1	4	1	5	4	1	39	3
City of Alexandria	3	2	2	3	2	1	2	1	2	0	0	2	2	2	2	26	2
Fairfax County	13	20	18	12	7	16	11	20	17	4	11	13	10	7	8	187	12
City of Fairfax	0	0	0	1	1	0	1	0	1	0	2	0	1	1	0	8	1
City of Falls Church	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	4	0
Loudoun County	1	1	1	3	3	2	3	1	3	0	1	2	3	3	1	28	2
City of Manassas	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
City of Manassas Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prince William County	2	3	1	3	4	0	4	7	5	6	6	6	1	7	6	62	4
Total Washington	91	92	84	85	87	72	97	87	110	82	79	86	86	72	72	1282	85

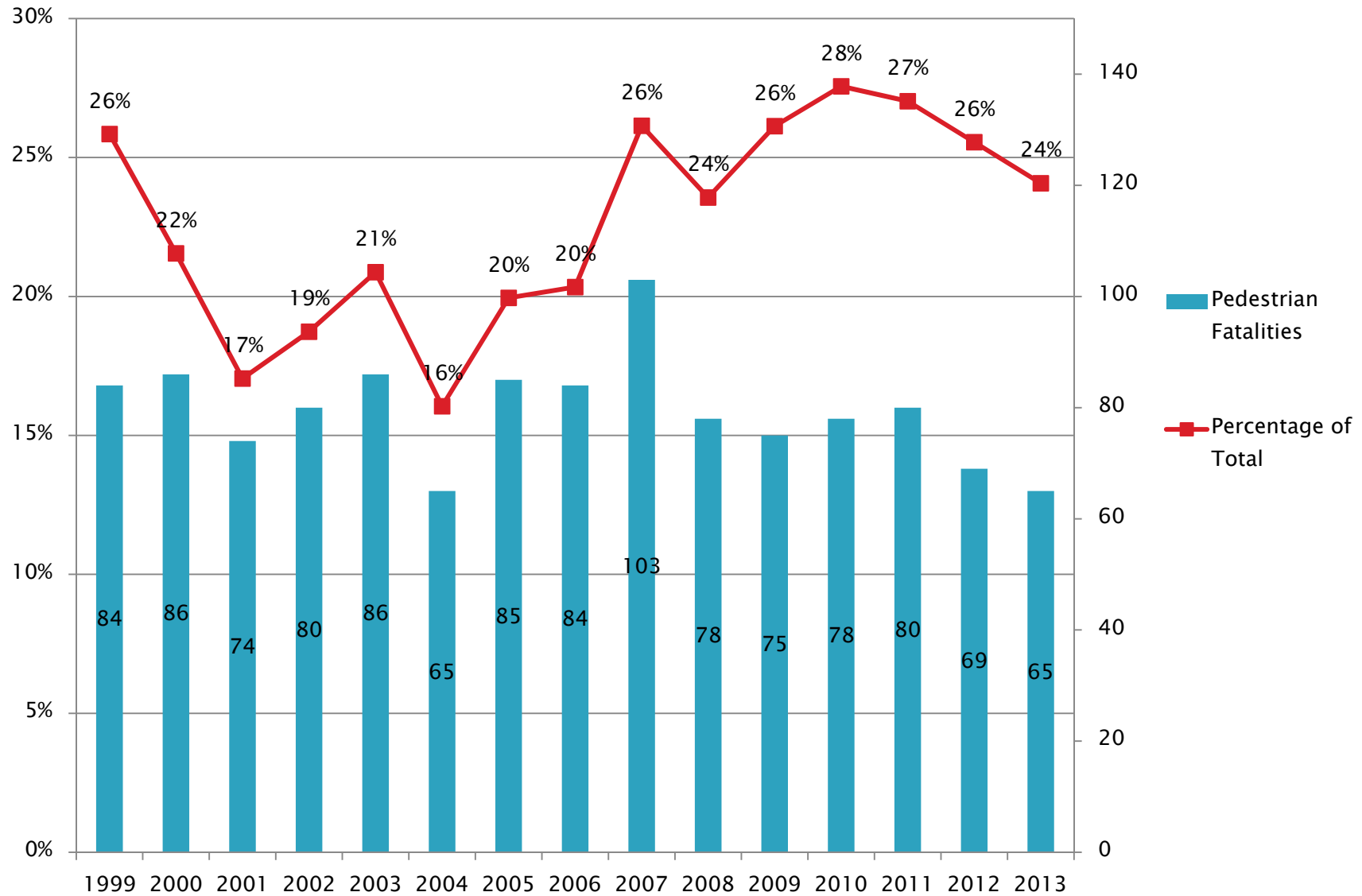
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Traffic Fatalities in the Washington Region



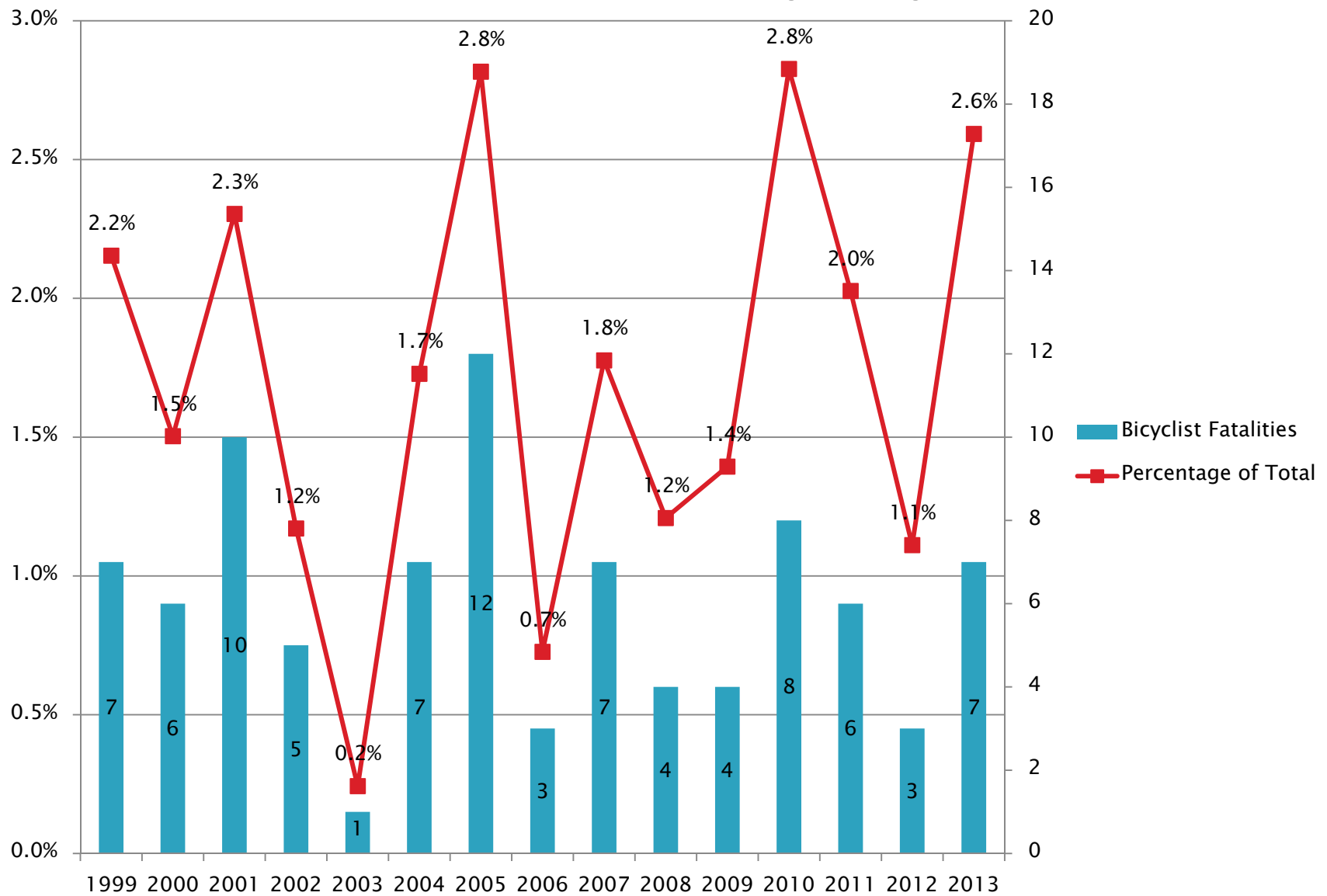
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Pedestrian Fatalities in the Washington Region



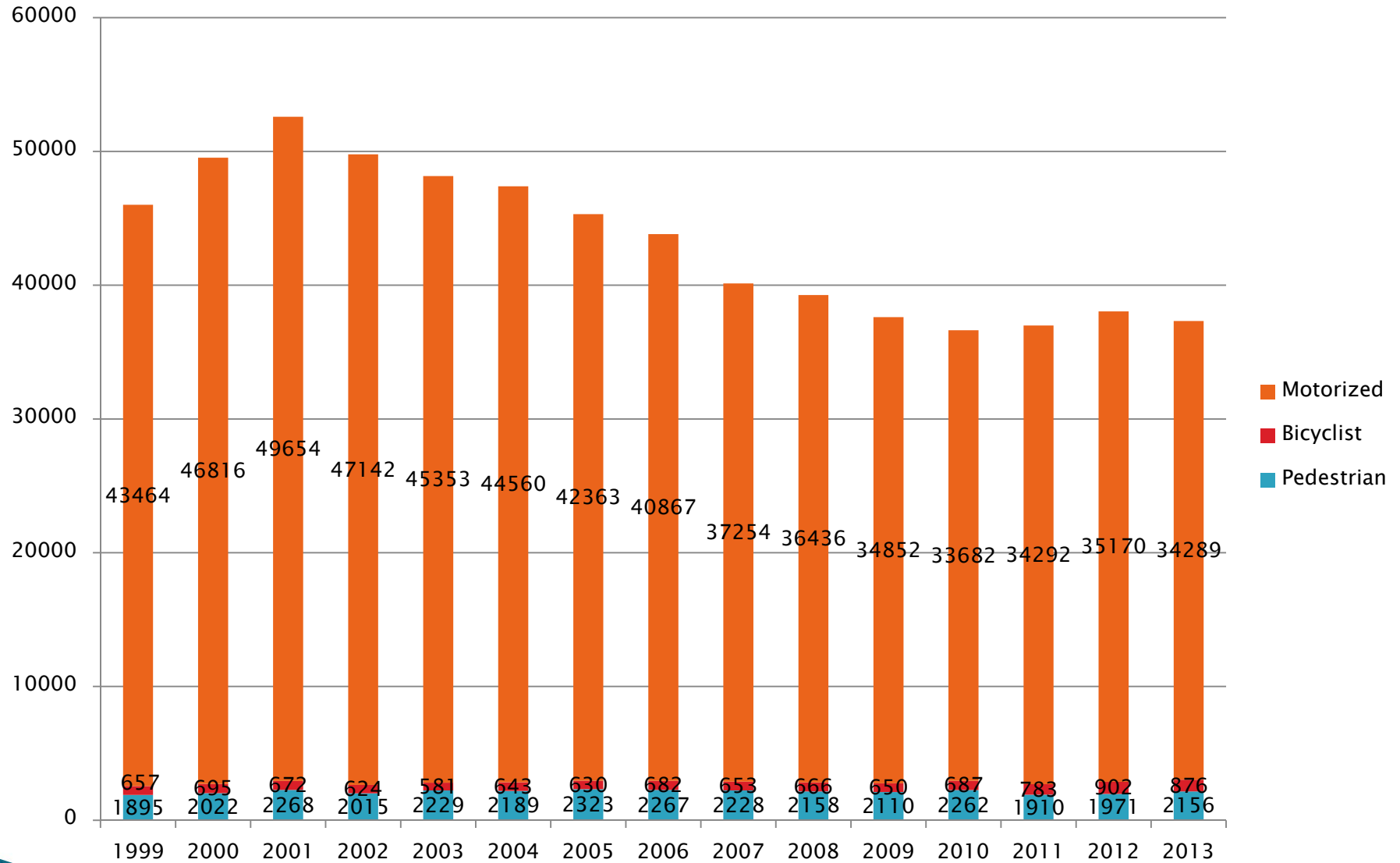
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Bicyclist Fatalities in the Washington Region



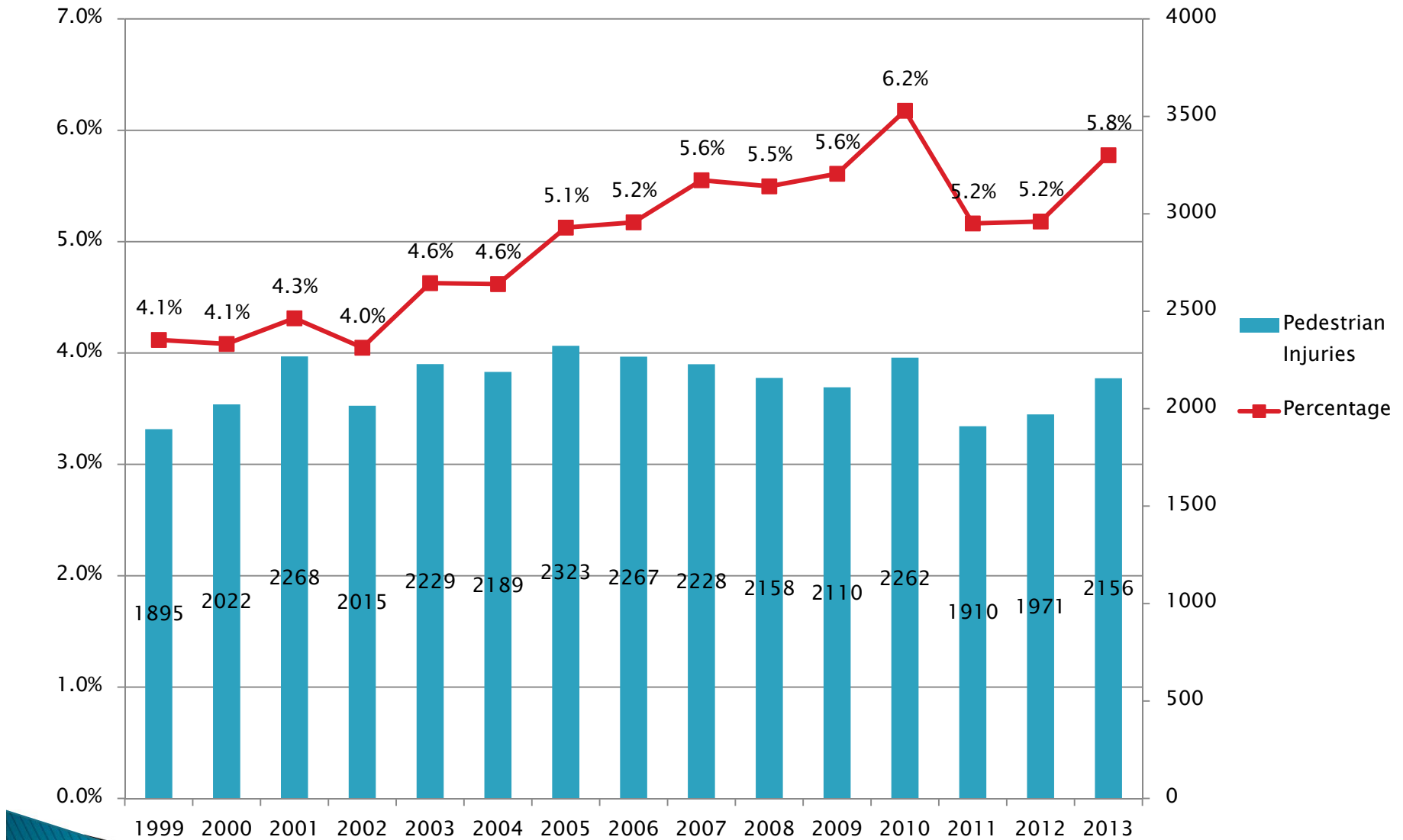
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Injury Trends: 1999–2013



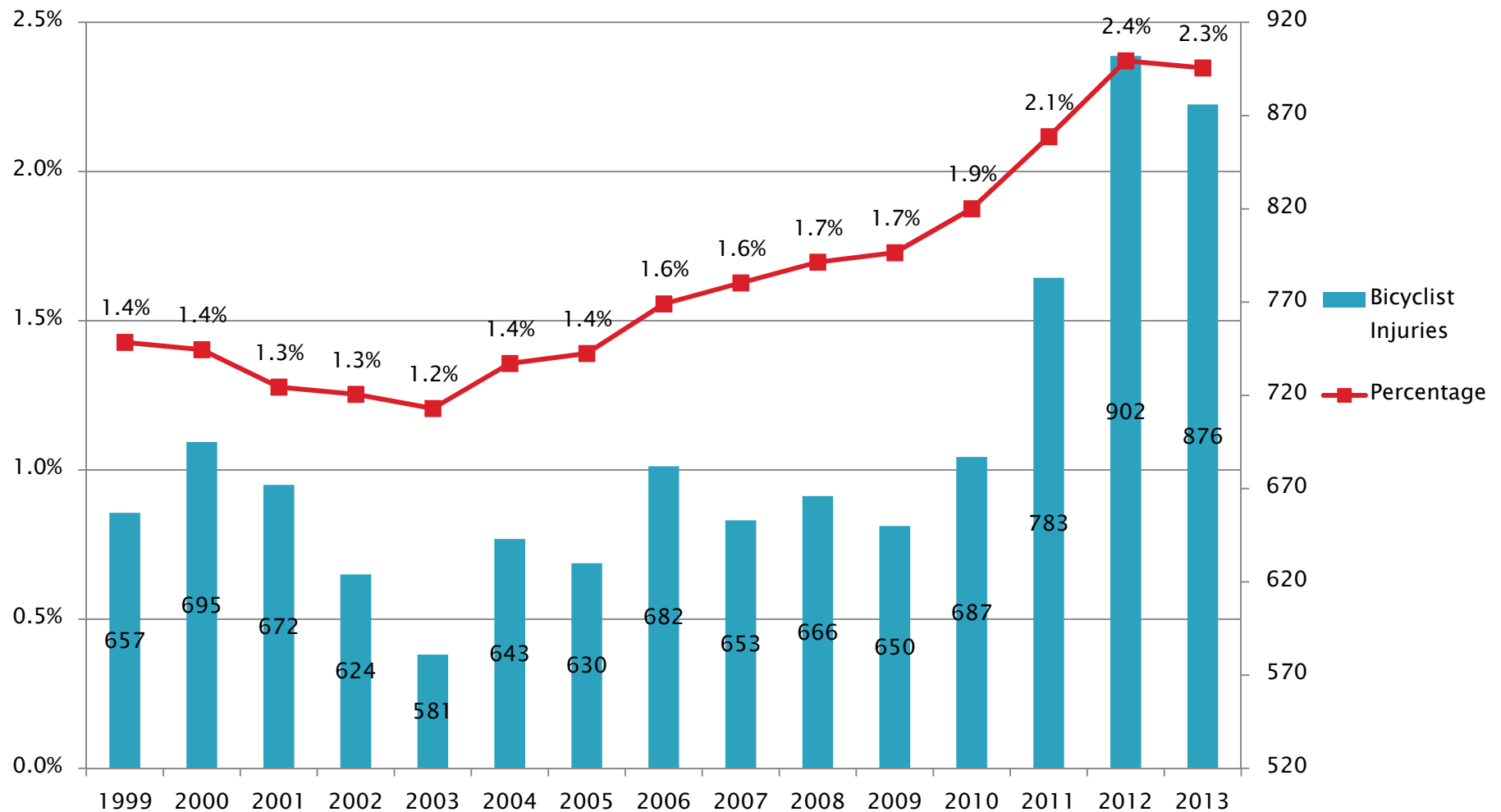
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Pedestrian Injuries in the Washington Region



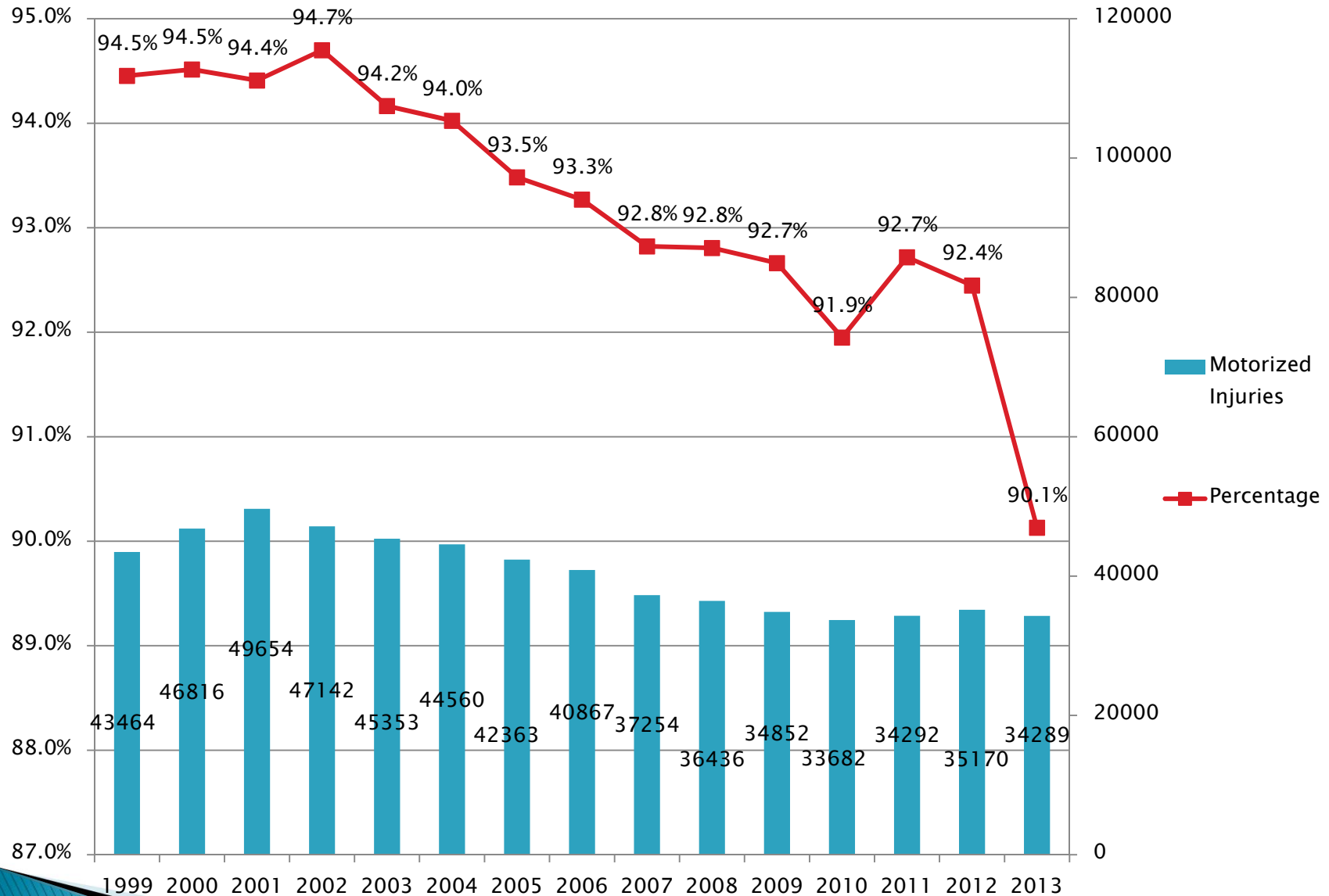
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Bicyclist Injuries in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Motorized Injuries in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

All Traffic Injuries in the Washington Region

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total	Average
District of Columbia	7228	10107	10758	8775	8233	8054	7555	7061	6571	6792	6529	7068	7045	7268	7456	116500	7767
Charles County	1647	1558	1694	1679	1570	1582	1483	1375	1449	1287	1249	1233	1214	1217	1223	21460	1431
Frederick County	2016	2051	1967	1950	1944	1707	1938	1732	1835	1655	1577	1338	1246	1342	1407	25705	1714
Montgomery County	8182	8205	8958	8787	8753	8348	7619	7695	6905	6598	6758	6510	6114	6048	5417	110897	7393
Prince George's County	9261	9620	10038	10044	9414	9162	8807	8636	7771	7118	6796	6084	6439	6411	6532	122133	8142
Arlington County	1946	1894	1966	1658	1484	1612	1438	1358	1195	1288	1227	1007	1005	1252	1090	21420	1428
City of Alexandria	1407	1309	1382	1395	1343	1419	1513	1372	1467	1492	816	615	601	609	681	17421	1161
Fairfax County	9117	9405	9865	9657	9188	9186	8741	8519	7971	7964	7588	7566	7767	8185	7608	128327	8555
City of Fairfax	332	366	415	383	377	298	317	305	238	201	169	175	205	243	227	4251	283
City of Falls Church	146	152	97	118	247	253	244	240	131	141	264	193	183	232	132	2773	185
Loudoun County	1347	1419	1643	1654	1740	1921	1954	1704	1678	1717	1681	1756	1869	1837	1917	25837	1722
City of Manassas	323	345	439	390	398	414	400	446	291	270	327	327	447	612	560	5989	399
City of Manassas Park	80	52	56	45	59	41	35	45	18	20	17	26	24	24	41	583	39
Prince William County	2984	3050	3316	3246	3413	3395	3272	3328	2615	2717	2614	2733	2826	2763	3030	45302	3020
Washington Total	46016	49533	52594	49781	48163	47392	45316	43816	40135	39260	37612	36631	36985	38043	37321	648598	43240

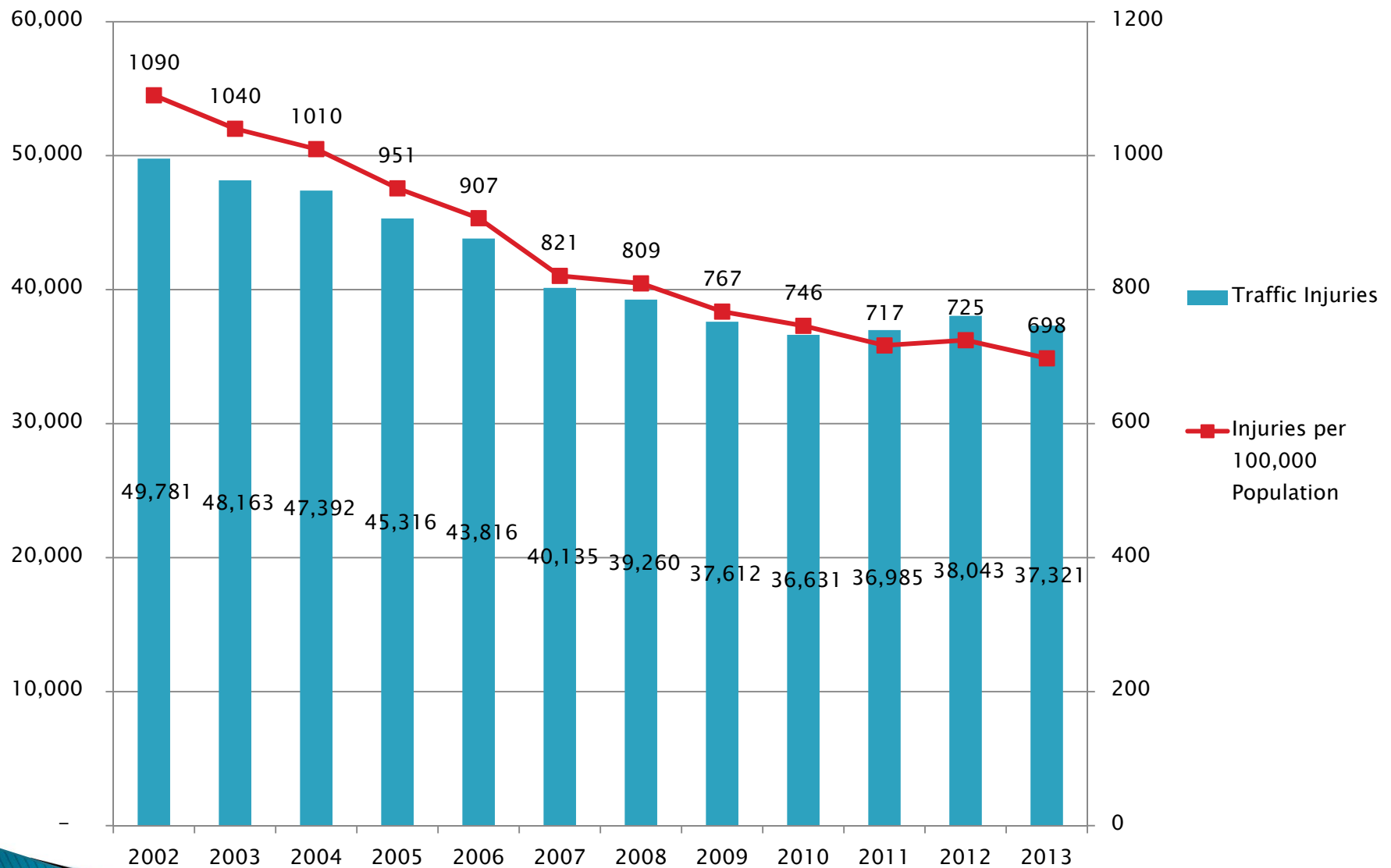
Sources: 2008 NHTSA State Traffic Safety Information; MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Pedestrian & Bicyclist Injuries

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total	Average
District of Columbia	718	851	935	779	844	962	998	953	850	776	833	1074	1122	1283	1320	14298	953
Charles County	31	34	60	35	44	53	57	34	50	43	40	49	37	38	29	634	42
Frederick County	61	71	62	72	71	55	55	52	59	67	83	68	40	53	37	906	60
Montgomery County	482	499	514	477	539	524	532	560	641	632	618	617	401	530	455	8021	535
Prince George's County	444	469	517	486	505	456	510	479	540	558	493	457	375	386	406	7081	472
Arlington County	170	185	180	160	154	167	140	178	151	145	137	151	184	210	204	2516	168
City of Alexandria	107	78	105	90	81	67	104	81	87	75	47	85	68	87	74	1236	82
Fairfax County	376	379	372	368	388	373	374	402	361	402	341	270	270	311	313	5300	353
City of Fairfax	21	20	22	22	30	22	16	25	18	13	15	14	20	17	12	287	19
City of Falls Church	11	14	13	13	6	9	9	5	4	10	8	4	5	11	3	125	8
Loudoun County	42	36	52	47	52	48	49	52	45	48	40	71	93	75	65	815	54
City of Manassas	11	13	22	15	19	21	28	20	17	9	21	22	13	27	24	282	19
City of Manassas Park	2	7	8	6	2	3	2	5	3	0	2	0	0	1	0	41	3
Prince William County	76	61	78	69	75	72	79	103	55	46	82	67	65	78	90	1096	73
Total	2552	2717	2940	2639	2810	2832	2953	2949	2881	2824	2760	2949	2693	3107	3032	42638	2843

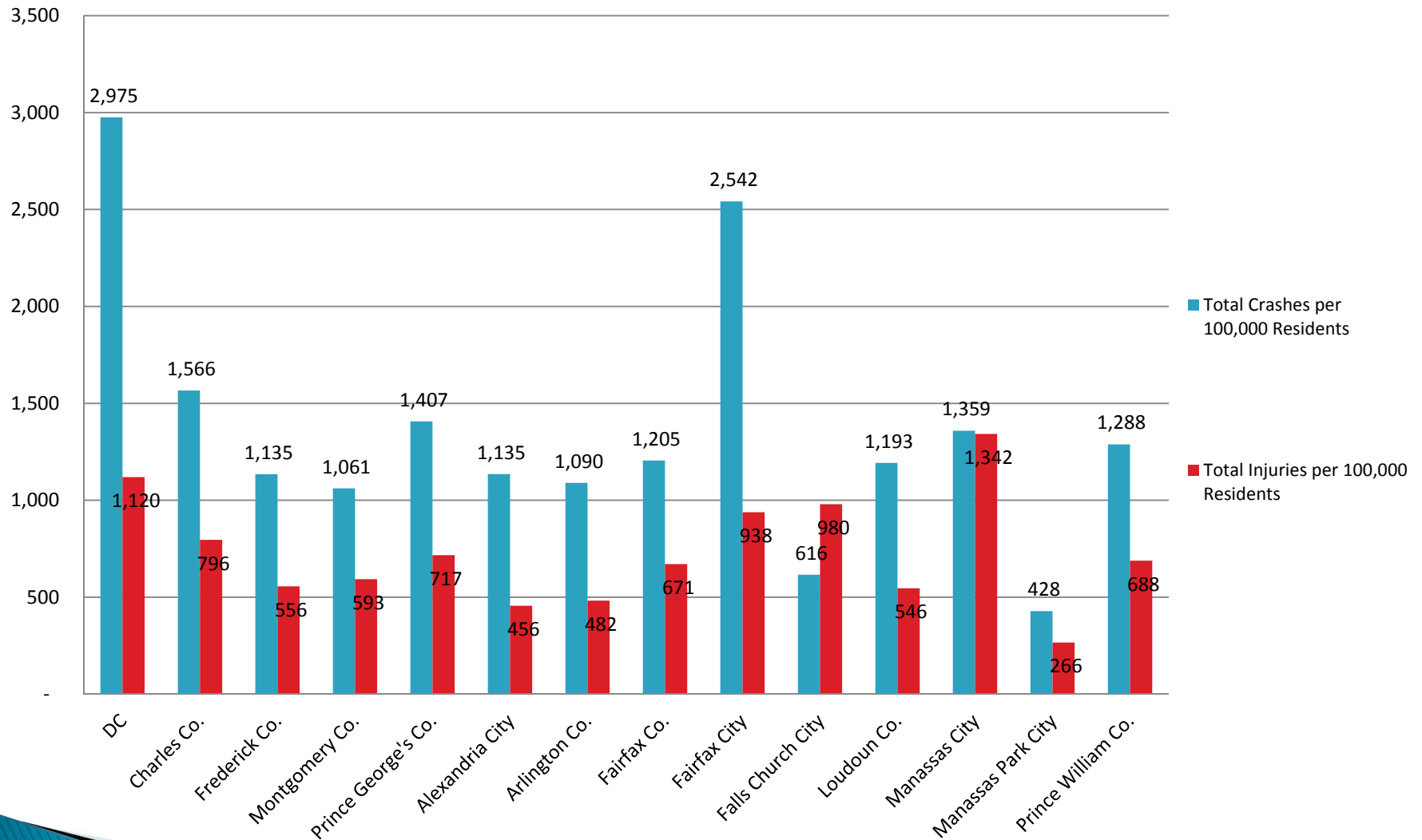
Sources: 2008 NHTSA State Traffic Safety Information; MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Traffic Injuries per 100,000 Population in the Washington Region



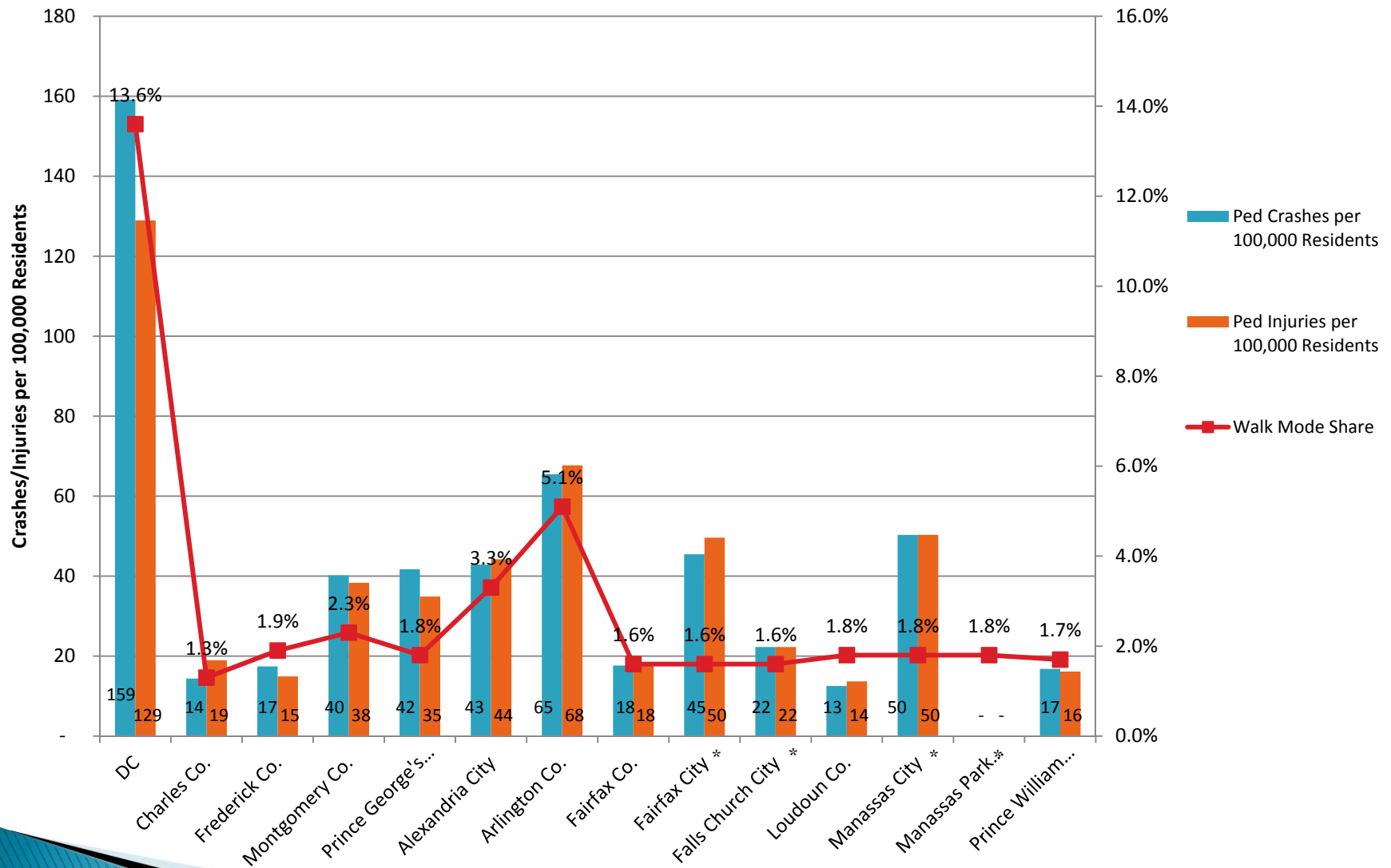
Sources: NHTSA State Traffic Safety Information; MDSHA Maryland Highway Safety Office; DDOT, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System; COG Member Population Estimates; American Community Survey

2013 Traffic Crashes and Injuries per 100,000 Population in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT, Virginia Treds; American Community Survey

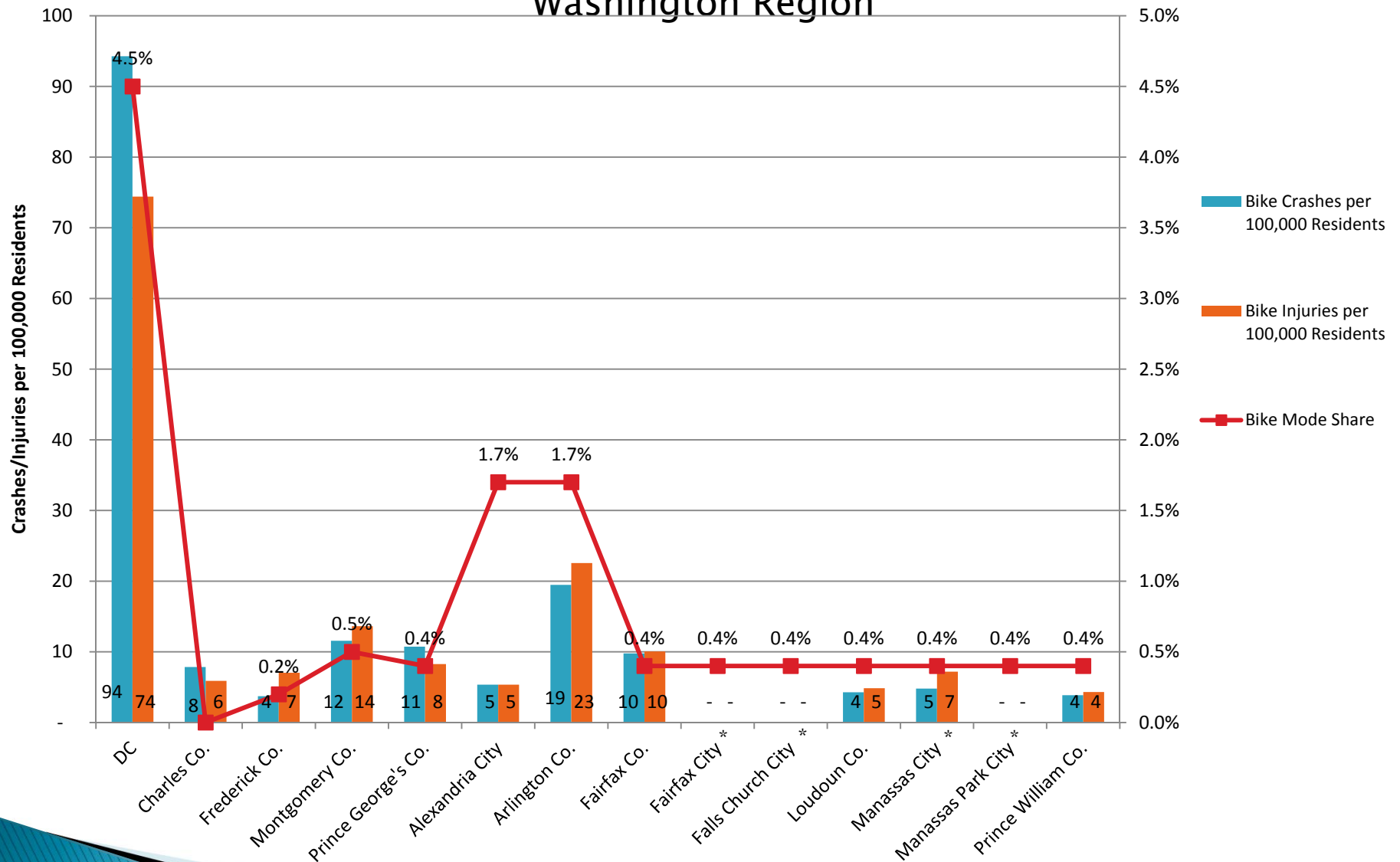
2013 Pedestrian Crashes and Injuries per 100,000 Population in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT, Virginia Treds; American Community Survey

*Mode share data not available for smaller jurisdictions – mode share of surrounding county presented as approximation.

2013 Bicycle Crashes and Injuries per 100,000 Population in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT, Virginia Treds; American Community Survey

*Mode share data not available for smaller jurisdictions – mode share of surrounding county presented as approximation.

Conclusions from Crash Data

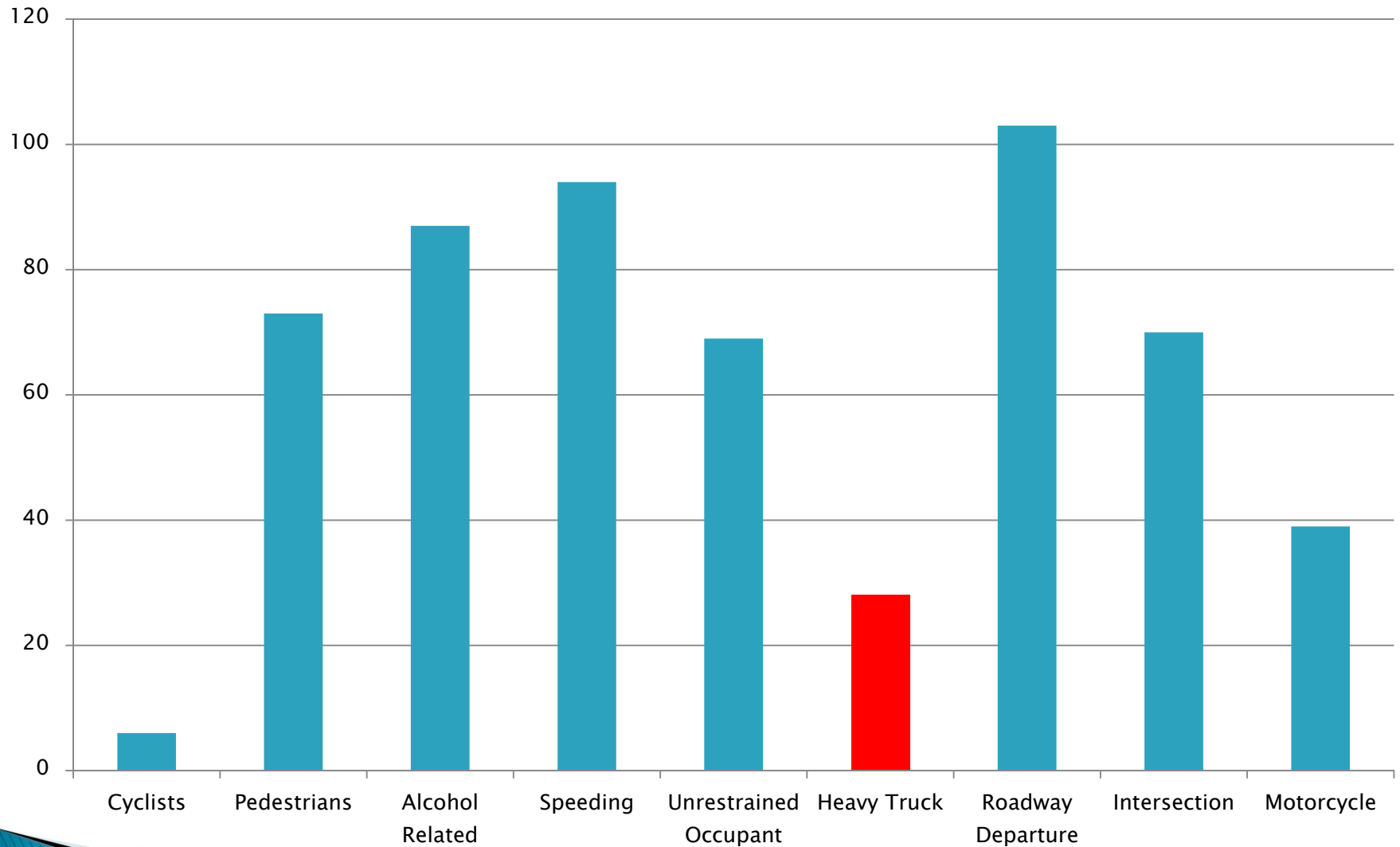
- ▶ Decline in overall fatalities, injuries, and crashes over the past ten years has slowed
- ▶ In 2013, the region saw an increase in population and VMT, but fatalities have not increased as drastically – resulting in lower fatality rates
- ▶ 2013 tied with 2012 and 2003 for fewest cyclist and pedestrian fatalities
- ▶ Decrease in pedestrian fatalities as a percentage of total since 2010
- ▶ Rise in pedestrian and cyclist injuries – both in absolute numbers and as a percentage of total
- ▶ Decrease in motorist injuries – both in absolute numbers and as a percentage of total



The Regional Truck Safety Picture



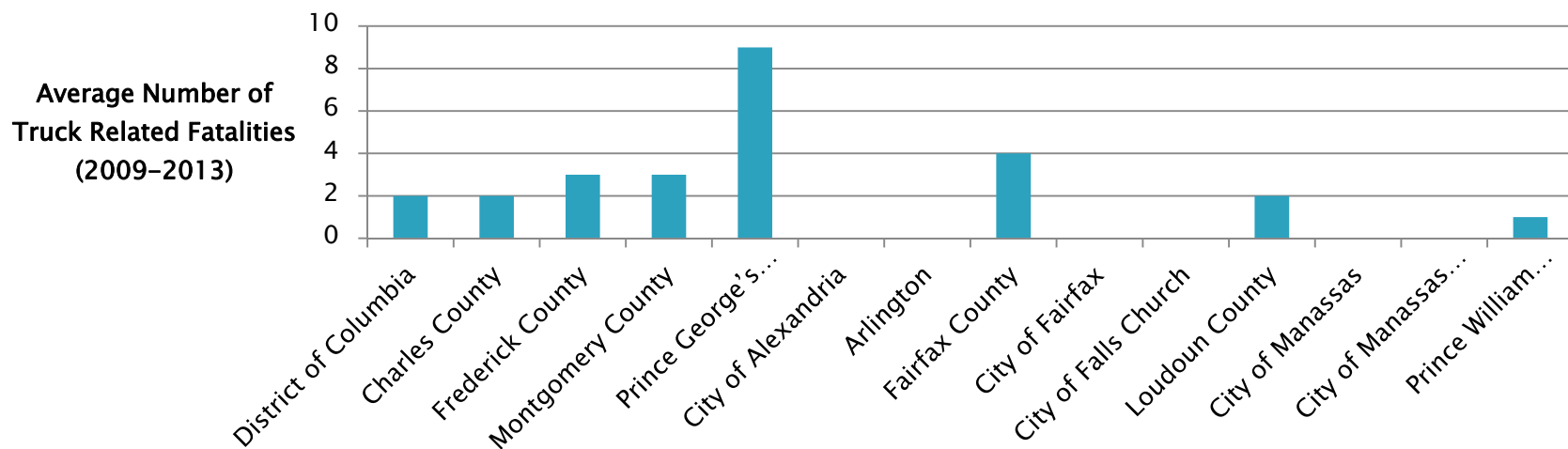
Traffic Fatalities in the Washington Region by Emphasis Area



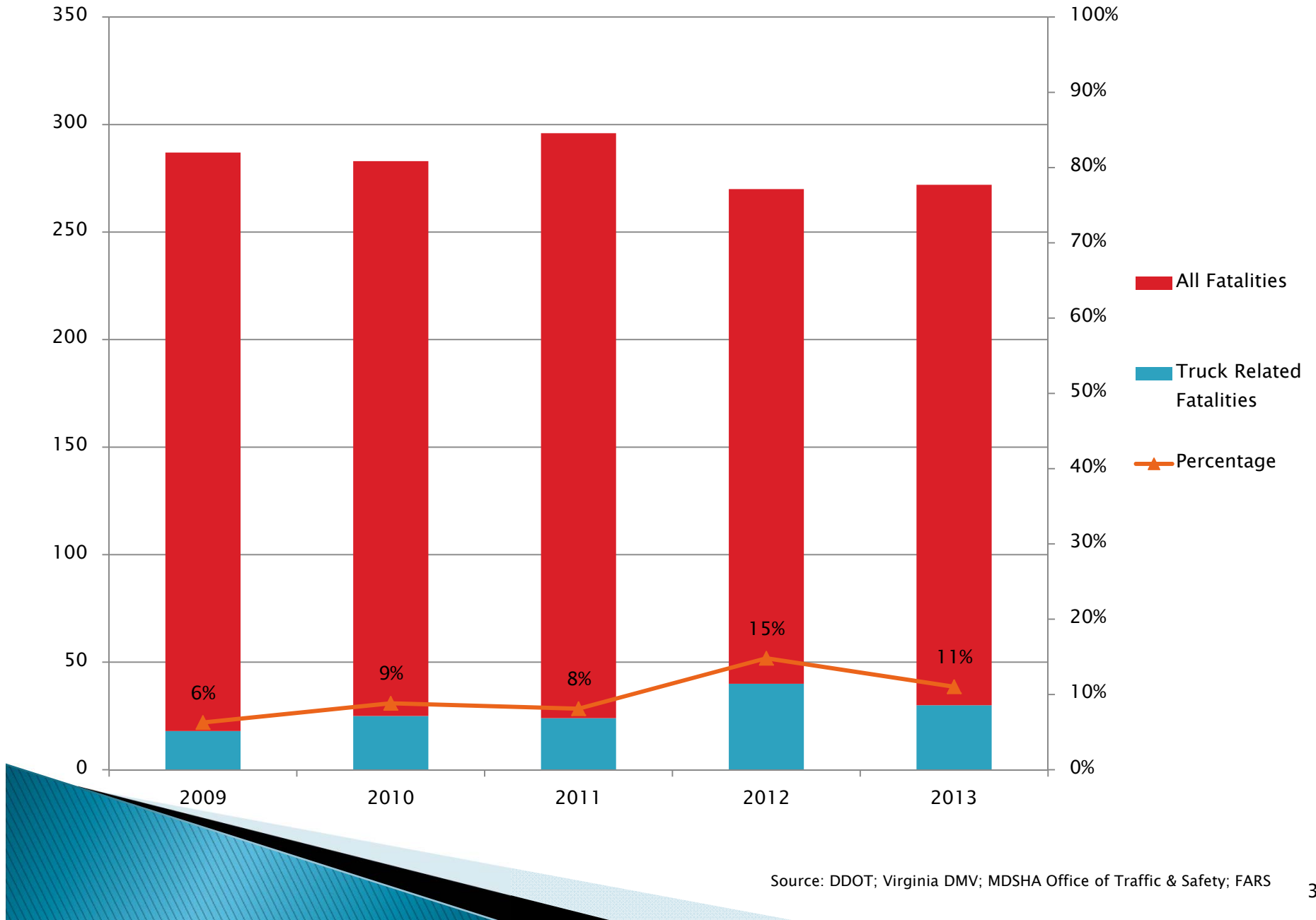
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety; FARS

Truck Related Fatalities in the Washington Region

	DC	Maryland				Virginia										
	District of Columbia	Charles County	Frederick County	Montgomery County	Prince George's County	City of Alexandria	Arlington	Fairfax County	City of Fairfax	City of Falls Church	Loudoun County	City of Manassas	City of Manassas Park	Prince William County	Total	
2009	1	0	5	2	7	0	0	2	0	0	1	0	0	0	18	
2010	3	4	2	3	7	0	1	3	0	0	1	0	0	1	25	
2011	2	4	1	4	6	1	1	3	0	0	0	0	0	2	24	
2012	1	0	6	5	15	0	0	9	0	0	3	0	0	1	40	
2013	3	4	3	1	8	0	0	5	0	0	3	0	0	3	30	
Total	10	12	17	15	43	1	2	22	0	0	8	0	0	7	137	
Average	2	2	3	3	9	0	0	4	0	0	2	0	0	1	27	



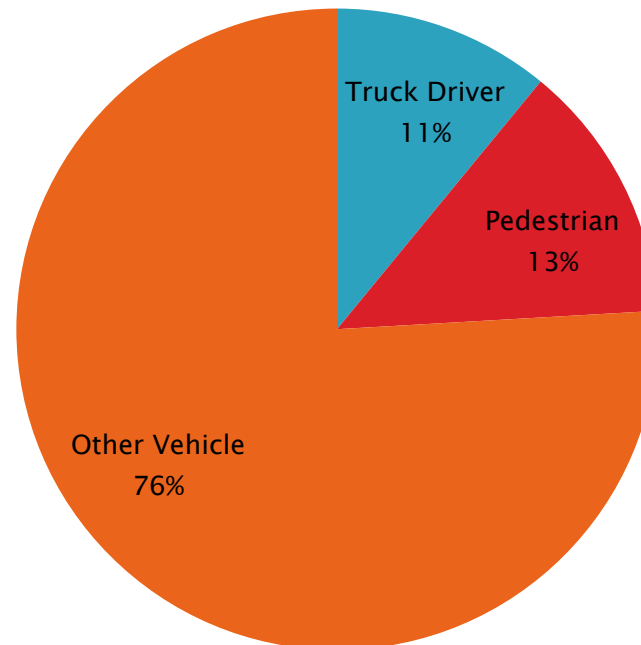
Truck Related Fatalities in the Washington Region



Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety; FARS

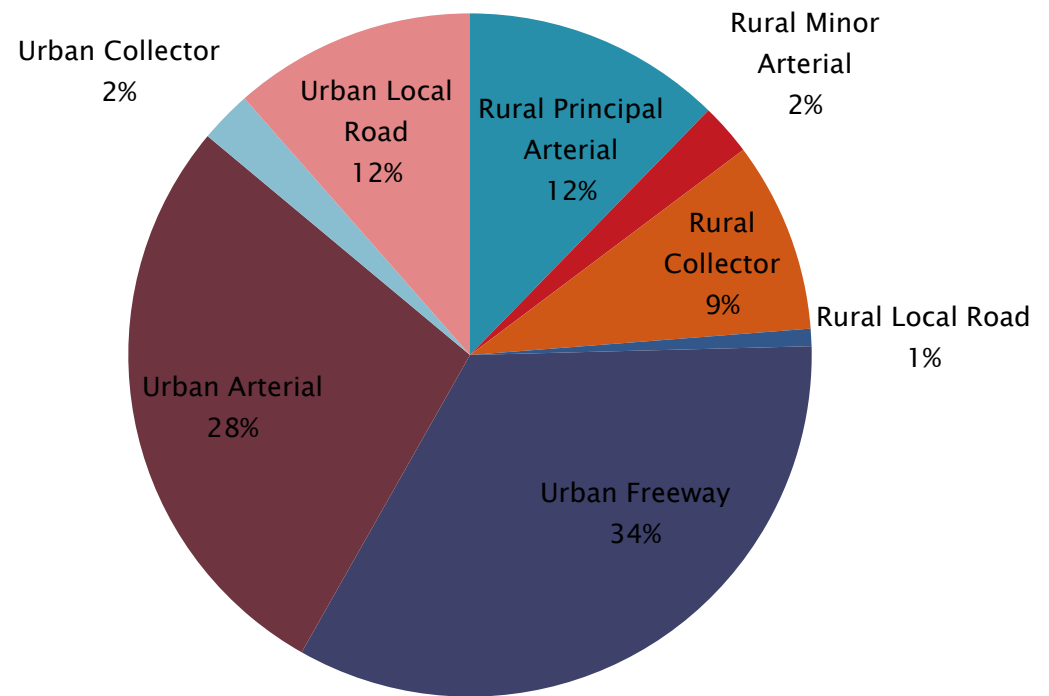
Who is Being Killed in Truck Involved Crashes?

Fatality	2009	2010	2011	2012	2013
Truck Drivers	1	1	5	4	4
Pedestrians /Cyclists	4	5	4	5	0
Occupants of Other Vehicle	13	19	15	31	26
TOTAL	18	25	24	40	30



On What Facilities Are Truck Involved Fatal Crashes Occurring?

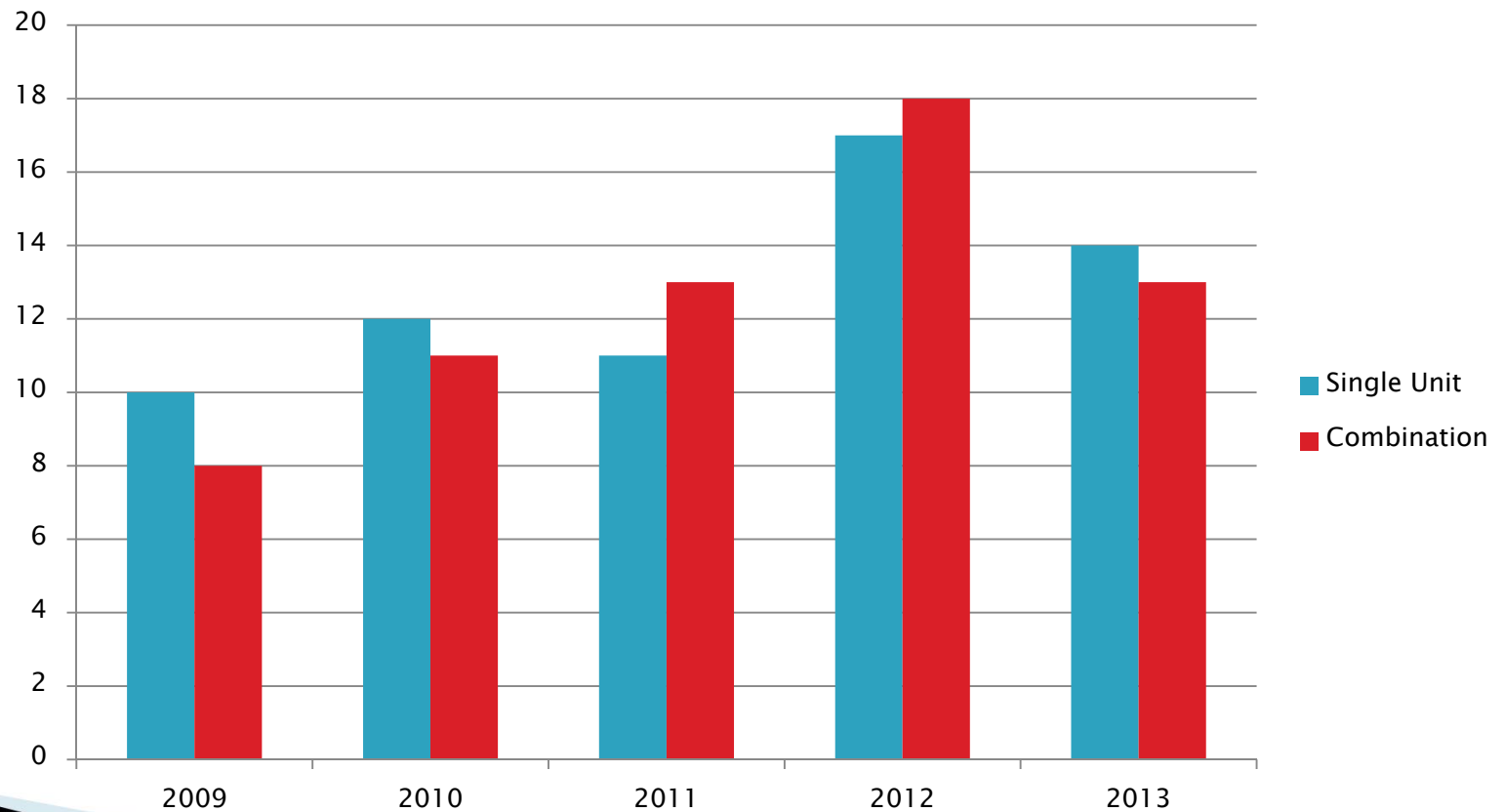
Roadway Functional Class	2009	2010	2011	2012	2013	Total
Rural Principal Arterial	0	4	6	2	3	15
Rural Minor Arterial	1	1	0	0	1	3
Rural Collector	4	1	2	2	2	11
Rural Local Road	0	0	1	0	0	1
Urban Freeway	6	5	8	12	10	41
Urban Arterial	4	7	3	13	7	34
Urban Collector	0	0	1	2	0	3
Urban Local Road	3	4	2	1	4	14



Source: FARS

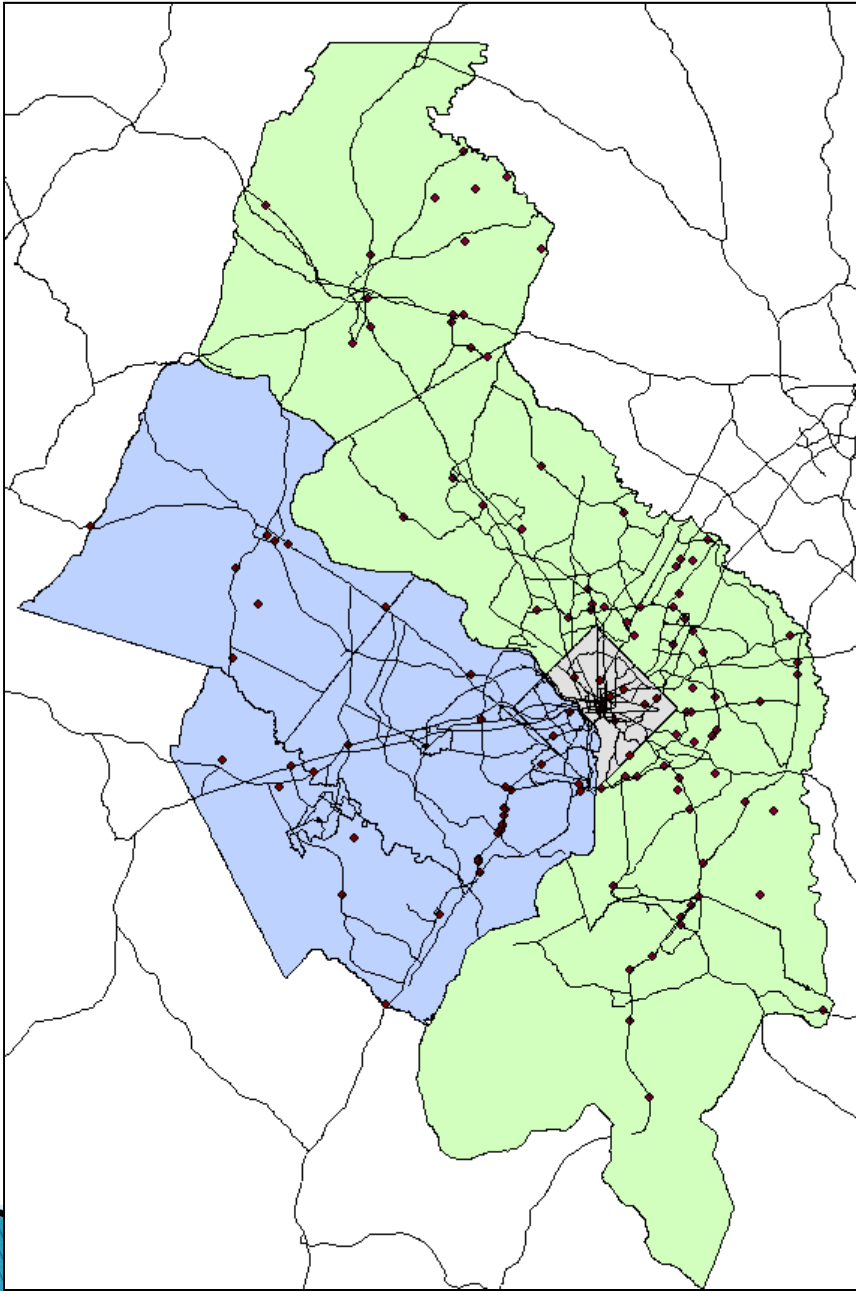
What Types of Trucks Are Involved in Fatal Crashes?

Type of Truck	2009	2010	2011	2012	2013	Total
Single Unit	10	12	11	17	14	64
Combination	8	11	13	18	13	63



Map of Truck Related Fatalities in the Washington Region

2009–2013



Sources

- ▶ DDOT – Traffic Safety Report Statistics SHSPs, Highway Safety Performance Plans
- ▶ MDSHA Office of Traffic & Safety – County Spreadsheets, Issue Area Spreadsheets
- ▶ Virginia DMV, Treds
- ▶ NHTSA – Traffic Fatalities
- ▶ US Census Bureau– American Community Survey
- ▶ Bureau of Transportation Statistics