

Vermont 2012 Safety Belt Use Study

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Vermont 2012 Safety Belt Usage Survey

2012 represents the twenty-fifth annual safety belt observational survey conducted under the auspices of the Vermont Governor’s Highway Safety Program and the fourteenth under the revised methodology. In normal years, this process would occur in two phases bracketing a “click it or ticket” (CIOT) awareness and enforcement program. These would include both a pre- and post-enforcement survey of the same sites intended to assess the effectiveness of the usage enhancement program. However, this year, because of scheduling limitations due to an ongoing redesign of the survey methods and sites, only the post-enforcement survey was conducted.

This survey methodology was initially developed by the Institute for Traffic Safety Management and Research, University at Albany, State University of New York to be consistent with the National Highway Traffic Safety Administration’s 1998 guidelines for state observational surveys. The current design is reviewed and updated regularly and complies with these NHTSA guidelines for sampling and precision.

This year’s field survey was conducted during June and early July, 2012. Data were collected on laptop computers for front seat occupants of all vehicles wearing safety belts at the 82 sample sites used in last year’s survey.

Survey Results

Data were collected for all days of the week. The results are displayed in Table 1.

Table 1 Safety Belt Usage Rate: Total Occupants

Region \ Volume Class	High	Medium	Low	Total
Chittenden County	89.4%	79.0%	0.0%	88.0%
Bennington/Addison	80.9%	86.1%	87.3%	85.6%
Franklin/Grand Isle	71.5%	75.0%	69.8%	73.5%
Northeast Kingdom	0.0%	78.5%	75.3%	77.4%
Rutland County	86.7%	86.9%	81.8%	86.4%
Washington/Lamoille	88.2%	88.1%	80.0%	87.6%
Windham/Orange/Windsor	82.3%	85.5%	88.4%	84.2%
Statewide				84.2%
Standard Error				0.0031

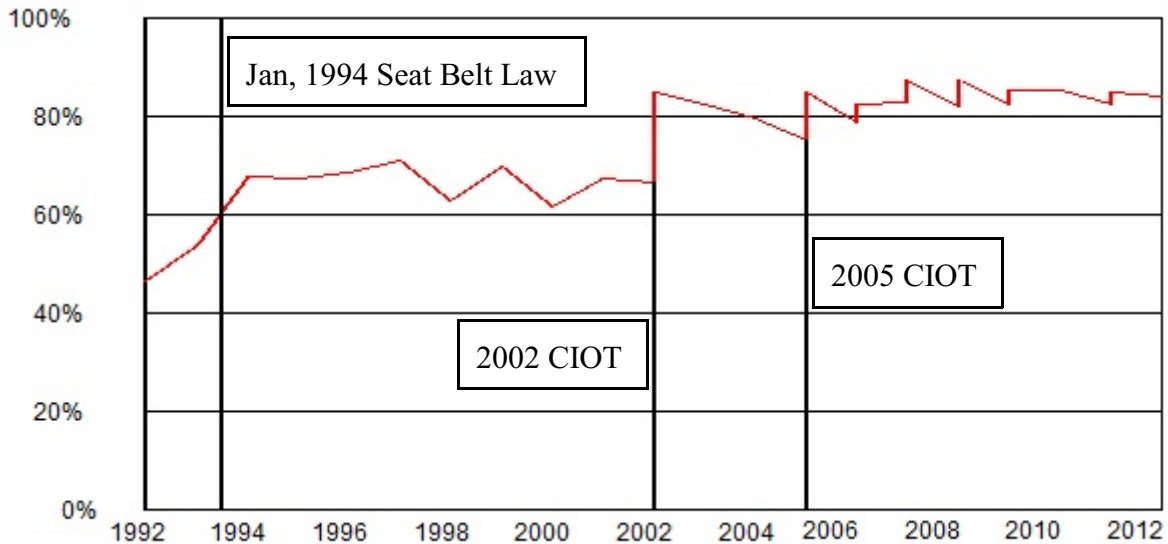
The post-enforcement rate of 84.2% safety belt usage continues for the second year in a row at just below the nationally recognized criterion of 85% after remaining just above 85% for four consecutive years (since 2007). Unlike in many previous years there was no apparent decline from the previous year’s lever, however, no pre-enforcement survey was conducted, so it is impossible to draw any firm conclusion about this.

The statistical methods used to evaluate the observational data are in conformance with those developed by NHTSA and the Institute for Traffic Safety Management and Research, University at Albany, State University of New York. They were described in complete detail in the 1999 report.

Historical Trends

Historical usage rates are displayed in the following graph.

Figure 1 Historical Safety Belt Usage Rate



Historically, it may be seen that usage rates increased significantly between the enactment of Vermont's safety belt law in January of 1994 and the 1994 observational study by over 10 percentage points from 54% to 68%. This increase is preceded by a more gradual rise prior to 1994, although this may be the result of increased public awareness due to the publicity surrounding the discussion of the law in addition to the effect of the law itself.

After the enactment of the law, safety belt usage remained fairly constant, varying slightly around about 65% until the public education and awareness campaign associated with the "Click-It-Or-Ticket" program in 2002. Directly associated with this program there was an increase of nearly 20 percentage points (from 66% to 85%). It may reasonably be inferred that these two events are causally related.

Prior to the 2005 enforcement effort, the rate drifted down gradually despite some effort at increased awareness and enforcement. The reasons for this are unclear. It is possible that the public was getting used to the low level awareness campaigns as they became more part of the normal background to living and generating little new awareness. For years, the rate had hovered between roughly 65 - 70%, suggesting a kind of "natural level" in the neighborhood of 2/3. Prior to 2005, each enforcement effort showed apparently diminishing returns with a subsequent drift toward lower rates immediately prior to the enforcement campaign. It is unclear whether this represented lower effectiveness of the campaigns when conducted from a higher base level, a gradual inuring of the public to the campaigns' methods or message, some quality of the campaign itself, or some other factor or combination of factors.

For the past several years the usage rate has held remarkably steady. For some years it seemed to vary in response to the CIOT campaigns, but for the past few years, even that variability has diminished, varying little at just below 85%.

Usage Rate: Additional Factors

In addition to the overall usage rate, the annual survey has collected information on potentially correlated factors such as sex of the subject (driver or passenger) and type of vehicle, including standard auto, van, SUV, and pickup. Data on these factors are included below in Table 2.

Table 2 Detailed Usage Rates

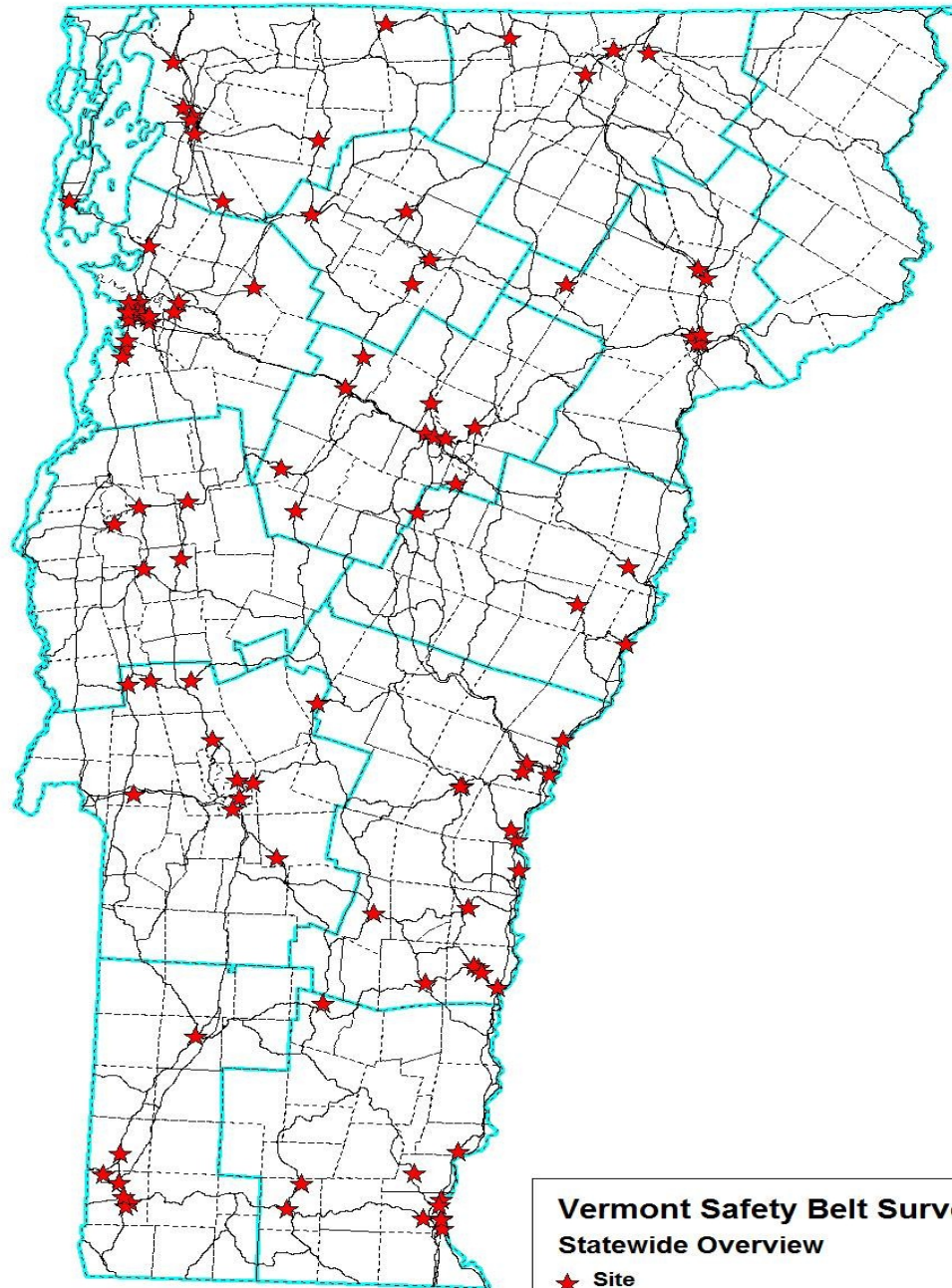
Safety Belt Usage Rate for:	Males	Females	Cars	Vans	SUVs	Pickups
Chittenden County	84.9%	92.2%	89.6%	90.8%	89.5%	74.3%
Bennington/Addison	81.3%	90.8%	90.2%	89.8%	87.4%	69.8%
Franklin/Grand Isle	63.6%	80.6%	74.8%	82.9%	77.5%	58.1%
Northeast Kingdom	70.1%	86.2%	83.5%	78.8%	84.2%	59.6%
Rutland County	80.3%	93.0%	88.9%	88.1%	92.2%	74.6%
Washington/Lamoille	82.3%	91.4%	89.5%	92.8%	93.1%	71.3%
Windham/Orange/Windsor	79.2%	91.1%	88.0%	87.8%	89.0%	69.7%
Statewide	78.9%	90.3%	87.4%	88.0%	88.4%	69.3%

Detailed usage rates continue to show notable variations. Highest rates continue to be found among females, while the lowest rates continue to be found among males and pickup truck drivers. Regionally, there is noticeably lower usage along the entire northern tier of the State (<80%), while other counties all exhibit higher usage rates, exceeding 85% in all but the southeastern most corner of the state.

Appendix A1: Individual Sites: Counting Record and Raw Belt Usage Rates: Pre-enforcement NEED NEW

Site Counting Record						Raw Usage Rates								
SID	DATE	TIME	DIR	LNS	INIT	OccBltRt	MBltrt	FBltrt	CarBltrt	VanBltrt	SUVBltrt	PUBltrt	AADT	Cls
1101	06/11/12	1127	W	1	zht	0.890	0.840	0.930	0.890	0.950	0.890	0.830	27000	11
1102	06/15/12	1050	N	1	zht	0.880	0.880	0.890	0.870	1.000	0.950	0.770	13100	11
1103	06/11/12	955	N	1	zht	0.910	0.900	0.970	0.930	0.920	0.840	0.890	10400	11
1104	06/08/12	1235	N	1	zht	0.900	0.870	0.940	0.900	0.910	0.900	0.860	17700	11
1105	06/11/12	1450	W	2	zht	0.870	0.840	0.950	0.880	1.000	0.840	0.770	40300	11
1106	06/08/12	1015	N	1	zht	0.950	0.920	0.980	0.990	1.000	0.930	0.790	17700	11
1107	06/08/12	1535	W	2	zht	0.930	0.880	0.960	0.940	0.850	0.940	0.860	42200	11
1108	06/08/12	1102	N	2	zht	0.950	0.920	0.980	0.970	0.900	0.980	0.780	26900	11
1109	06/13/12	1610	E	1	zht	0.910	0.850	0.990	0.970	0.830	0.870	0.820	11300	11
1110	06/08/12	1400	N	1	zht	0.870	0.790	0.970	0.950	0.860	0.860	0.670	11300	11
1111	06/17/12	1245	E	1	zht	0.900	0.880	0.940	0.940	1.000	0.960	0.760	10300	11
1112	06/11/12	1405	S	1	zht	0.720	0.830	0.630	0.720	1.000	0.690	0.000	12900	11
1113	06/15/12	1255	W	1	zht	0.870	0.840	0.890	0.860	1.000	0.950	0.690	17800	11
1201	06/08/12	1445	N	2	zht	0.890	0.840	0.950	0.900	1.000	0.920	0.750	8000	12
1202	06/11/12	1040	N	1	zht	0.710	0.680	0.790	0.730	0.500	0.810	0.560	9500	12
2101	06/09/12	845	S	1	dm	0.810	0.780	0.900	0.900	0.850	0.850	0.550	12000	21
2201	06/09/12	1210	W	1	dm	0.800	0.800	0.810	0.880	0.850	0.810	0.630	9800	22
2202	06/09/12	945	S	1	dm	0.900	0.840	0.940	0.960	0.730	0.930	0.720	4900	22
2203	06/22/12	1010	S	1	zht	0.910	0.890	0.890	0.950	1.000	0.830	0.780	7900	22
2204	06/09/12	1030	S	1	dm	0.850	0.830	0.900	0.850	0.890	0.910	0.790	6600	22
2205	06/22/12	1105	W	1	zht	0.890	0.760	0.970	0.930	1.000	0.840	0.820	5900	22
2206	06/09/12	1125	S	1	dm	0.850	0.800	0.900	0.910	0.850	0.850	0.650	8200	22
2301	06/22/12	1430	N	1	zht	0.870	0.810	1.000	0.870	1.000	1.000	0.740	2400	23
3101	06/23/12	1323	N	1	zht	0.720	0.610	0.820	0.760	0.890	0.770	0.460	17400	31
3201	06/14/12	1543	N	1	zht	0.740	0.620	0.770	0.710	1.000	0.670	0.730	4800	32
3202	06/23/12	1535	S	1	zht	0.920	0.840	1.000	0.950	1.000	0.950	0.670	2800	32
3203	06/23/12	1205	W	1	zht	0.760	0.680	0.880	0.780	0.800	0.840	0.650	6100	32
3204	06/23/12	1415	N	1	zht	0.690	0.670	0.700	0.720	0.540	0.670	0.720	8600	32
3301	06/14/12	1658	E	1	zht	0.700	0.470	0.800	0.650	1.000	0.880	0.290	1300	33
4201	06/19/12	1550	S	1	zht	0.820	0.700	0.940	0.870	0.700	0.900	0.610	3000	42
4202	06/19/12	1500	W	1	zht	0.670	0.570	0.800	0.690	1.000	0.690	0.540	5700	42
4203	06/19/12	1330	W	2	zht	0.780	0.700	0.860	0.850	0.400	0.790	0.640	5000	42
4204	06/19/12	1415	W	1	zht	0.710	0.690	0.790	0.730	0.670	0.730	0.680	4200	42
4205	06/19/12	1240	W	2	zht	0.910	0.860	0.980	1.000	0.920	0.920	0.680	9000	42
4206	06/14/12	1208	S	1	zht	0.760	0.660	0.890	0.850	0.820	0.890	0.470	8300	42
4301	06/19/12	1710	S	1	zht	0.810	0.760	0.880	0.840	0.500	1.000	0.610	2000	43
4302	06/14/12	1430	N	1	zht	0.730	0.630	0.800	0.730	1.000	1.000	0.620	1300	43
4303	06/14/12	1330	S	1	zht	0.700	0.620	0.730	0.830	1.000	0.560	0.570	1500	43
5101	06/16/12	1005	N	2	dm	0.880	0.820	0.930	0.920	0.830	0.900	0.770	17000	51
5102	06/16/12	715	W	2	dm	0.880	0.810	0.950	0.890	1.000	0.970	0.700	11100	51

SID	DATE	TIME	DIR	LNS	INIT	OccBltrt	MBltrt	FBltrt	CarBltrt	VanBltrt	SUVBltrt	PUBltrt	AADT	Cls
5103	06/16/12	905	N	2	dm	0.850	0.810	0.930	0.890	0.860	0.890	0.730	18900	51
5201	06/16/12	1055	S	1	dm	0.870	0.790	0.940	0.890	0.880	0.900	0.760	9900	52
5202	06/16/12	1210	N	1	dm	0.890	0.860	0.920	0.910	0.830	0.970	0.750	3400	52
5203	06/16/12	810	E	1	dm	0.820	0.710	0.970	0.870	0.890	1.000	0.670	4400	52
5204	06/22/12	1307	E	1	zht	0.920	0.880	0.950	0.890	0.800	1.000	0.940	2600	52
5301	06/22/12	1208	N	1	zht	0.820	0.790	0.810	0.820	1.000	0.830	0.700	1900	53
6101	06/18/12	1125	N	1	zht	0.890	0.840	0.920	0.910	0.920	0.920	0.750	12100	61
6102	06/18/12	1210	E	1	zht	0.840	0.770	0.920	0.870	0.870	0.880	0.670	14100	61
6103	06/21/12	1445	S	1	zht	0.910	0.890	0.930	0.940	0.920	0.920	0.810	12000	61
6104	06/18/12	1040	N	1	zht	0.890	0.860	0.900	0.890	0.820	0.960	0.830	12500	61
6201	06/18/12	1305	S	1	zht	0.870	0.800	0.930	0.910	0.900	1.000	0.500	5000	62
6202	06/18/12	1415	W	1	zht	0.940	0.940	0.930	0.930	1.000	0.950	0.920	4700	62
6203	06/17/12	1408	N	1	zht	0.920	0.890	0.920	0.910	1.000	0.980	0.830	6000	62
6204	06/21/12	1640	W	1	zht	0.690	0.500	0.840	0.750	0.800	0.830	0.410	2600	62
6205	06/21/12	1530	S	1	zht	0.880	0.810	0.970	0.900	1.000	0.950	0.680	6900	62
6301	06/21/12	1320	N	1	zht	0.800	0.760	0.740	0.840	1.000	0.790	0.500	1200	63
7101	06/08/12	1235	S	2	dm	0.820	0.770	0.900	0.880	0.770	0.830	0.660	13900	71
7102	06/11/12	750	E	1	dm	0.820	0.770	0.920	0.910	0.850	0.830	0.650	12600	71
7103	06/08/12	915	S	1	dm	0.770	0.710	0.830	0.780	0.940	0.810	0.650	14900	71
7104	06/11/12	845	E	1	dm	0.890	0.820	0.980	0.960	0.960	0.940	0.670	12000	71
7105	06/12/12	1625	W	2	dm	0.900	0.840	0.940	0.920	0.940	0.880	0.770	11900	71
7106	06/08/12	825	E	1	dm	0.860	0.830	0.900	0.880	0.930	0.850	0.790	16700	71
7107	06/05/12	1135	W	1	dm	0.800	0.750	0.880	0.870	0.700	0.850	0.600	11600	71
7108	06/08/12	1630	N	1	dm	0.870	0.780	0.970	0.930	0.830	0.960	0.660	10200	71
7109	06/12/12	1540	S	2	dm	0.800	0.750	0.870	0.780	0.950	1.000	0.690	14100	71
7110	06/08/12	1350	E	1	dm	0.850	0.780	0.930	0.870	0.970	0.920	0.690	10000	71
7111	06/05/12	1225	E	1	dm	0.810	0.780	0.870	0.820	0.810	0.860	0.750	10100	71
7112	06/08/12	1000	N	1	dm	0.800	0.710	0.890	0.830	0.770	0.910	0.650	13600	71
7113	06/08/12	1135	N	1	dm	0.750	0.720	0.800	0.750	0.830	0.900	0.630	16500	71
7201	06/12/12	1820	W	1	dm	0.850	0.810	0.930	0.880	0.800	0.870	0.720	3400	72
7202	06/11/12	930	W	1	dm	0.880	0.880	0.930	0.900	0.830	1.000	0.750	4700	72
7203	06/06/12	750	E	1	dm	0.830	0.790	0.880	0.860	1.000	0.870	0.650	4000	72
7204	06/05/12	1045	E	2	dm	0.910	0.870	0.960	0.890	1.000	0.940	0.940	7800	72
7205	06/08/12	1535	S	1	dm	0.850	0.810	0.930	0.930	0.710	0.880	0.670	6500	72
7206	06/08/12	1435	S	1	dm	0.860	0.800	0.960	0.950	0.830	0.900	0.640	7100	72
7207	06/07/12	1355	N	1	dm	0.790	0.770	0.830	0.830	0.780	0.810	0.700	9300	72
7208	06/07/12	1300	N	1	dm	0.870	0.760	1.000	0.930	1.000	1.000	0.640	3700	72
7209	06/08/12	1735	S	1	dm	0.840	0.790	0.950	0.930	1.000	0.860	0.640	4500	72
7210	06/07/12	1145	E	1	dm	0.900	0.870	1.000	0.980	0.850	1.000	0.760	3100	72
7301	06/21/12	1210	W	1	zht	0.880	0.860	0.900	0.890	0.860	0.910	0.770	1600	73
7302	06/12/12	1730	N	1	dm	0.900	0.840	0.970	0.950	1.000	0.800	0.630	1700	73
7303	06/08/12	1045	N	1	dm	0.870	0.810	0.960	0.940	1.000	0.890	0.670	2200	73



Vermont Safety Belt Survey
Statewide Overview
★ Site