



**Testimony in Support of Amending S.285  
Submitted to the Vermont House Committee on Natural Resources, Fish and  
Wildlife**

Chairman Deen and Committee Members,

My name is Bruce Westcott; I serve as General Manager of the Central Vermont Solid Waste Management District and am Vice-Chair of the Vermont Solid Waste District Manager's Association.

S.285 proposes to amend § 6607a.(g)(1)(C) to strike a requirement that haulers “offer collection of food residuals separate from other solid waste”, etc. The Committee has expressed interest in the concept of retaining that requirement in denser areas of some Vermont municipalities.

The Chair asked that I work with John Adams (VCGI), and seek guidance from Cathy Jamieson, Solid Waste Program Manager to provide data which could:

- ✓ Make easier the understanding of the “density” concept by legislators, haulers, and citizens,
- ✓ Allow for simpler on-the-ground, operational guidance to haulers and their customers, and
- ✓ Give the Committee flexibility in determining what areas might be included.

I attempted to look at some new data – populations of each municipality, in addition to the number of residential structures in each municipality. I have relied on data publicly available from the Vermont Agency of Transportation, and the Department of Health.

I also identified Vermont municipalities with “large” populations; i.e., more than 5,000 residents. There are 27 such entities, 22 of which are listed on these pages. Vermont includes five “large” municipalities that do not contain dense areas – for example: Jericho.

I attempted to answer two questions prompted by your earlier discussion:

1. Across the square mileage of each municipality, what is the overall population density?
2. Along all the road miles in each municipality (excluding Interstates, forest trails, etc.), what is the average population density?

The tables on the following two pages show the ranked results.

**Across the square mileage of each municipality, what is the overall population density?**

These municipalities contain nearly 45% of Vermont's population. Of them, five have significantly lower overall densities. All other municipalities have even lower population densities.

<b>Town/City</b>	<b>Total Residential Structures</b>	<b>Area (sq.mi.)</b>	<b>Structures/ Sq.Mi.</b>	<b>Population</b>	<b>People/ Sq.Mile</b>
St. Albans City	2,191	1.96	1118.33	6,792	3,466.8
Winooski	1,597	1.47	1085.14	7,128	4,843.4
Burlington	10,562	15.35	688.20	42,260	2,753.6
Rutland City	5,277	7.67	688.10	15,601	2,034.3
Barre City	2,540	4.03	630.78	8,710	2,163.0
Vergennes	853	2.53	336.75	2,599	1,026.1
Montpelier	2,445	10.25	238.49	7,535	735.0
Newport City	1,631	7.62	213.99	4,328	567.8
South Burlington	6,276	30.78	203.87	18,971	616.3
Essex	6,594	39.42	167.28	21,199	537.8
Bennington	5,223	42.26	123.58	15,290	361.8
Brattleboro	3,922	32.65	120.12	11,607	355.5
Williston	3,557	31.08	114.43	9,578	308.1
Barre Town	3,108	30.73	101.15	7,792	253.6
Colchester	5,830	60.41	96.51	17,319	286.7
Hartford	4,275	45.98	92.98	9,671	210.3
Rutland Town	1,561	19.22	81.21	4,061	211.3
Springfield	3,470	49.58	69.99	9,044	182.4
Milton	4,065	60.96	66.68	10,759	176.5
Windsor	1,300	19.67	66.10	3,419	173.8
St. Johnsbury	2,416	36.85	65.57	7,250	196.8
Shelburne	2,869	43.77	65.54	7,726	176.5
Middlebury	2,385	39.69	60.09	8,654	218.0
Swanton	2,896	61.68	46.95	6,514	105.6
St. Albans Town	2,829	60.83	46.50	6,432	105.7
Rockingham	1,855	42.16	43.99	5,062	120.1
Westminster	1,464	45.20	32.39	3,034	67.1
Mendon	564	37.94	14.87	1,022	26.9
<b>TOTAL</b>	<b>93,555</b>	<b>882</b>		<b>279,357</b>	
<b>% of Vermont</b>	33.9%	9.2%		44.7%	

**Along all the road miles in each municipality (excluding Interstates, forest trails, etc.), what is the average population density?**

These municipalities contain nearly 45% of Vermont’s population, and about 27% of Vermont road miles (excluding Interstates, forest trails, etc.). Of them, the bottom two have significantly lower population per road mile. Other municipalities have similarly low distributions of people along roads.

<b>Town/City</b>	<b>Total Residential Structures</b>	<b>Road_Miles</b>	<b>Structures/ Road Mile</b>	<b>Population</b>	<b>People/ Road Mile</b>
Burlington	10,562	104.91	100.68	42,260	402.82
Winooski	1,597	16.78	95.16	7,128	424.74
St. Albans City	2,191	24.82	88.27	6,792	273.64
Rutland City	5,277	76.06	69.38	15,601	205.12
South Burlington	6,276	101.01	62.13	18,971	187.81
Essex	6,594	106.64	61.84	21,199	198.80
Vergennes	853	14.38	59.31	2,599	180.71
Barre City	2,540	50.32	50.48	8,710	173.11
Montpelier	2,445	56.72	43.10	7,535	132.84
Colchester	5,830	144.48	40.35	17,319	119.87
Newport City	1,631	45.04	36.21	4,328	96.09
Bennington	5,223	146.27	35.71	15,290	104.53
Shelburne	2,869	88.19	32.53	7,726	87.60
Brattleboro	3,922	122.15	32.11	11,607	95.02
Williston	3,557	114.71	31.01	9,578	83.50
Barre Town	3,108	105.55	29.45	7,792	73.82
St. Albans Town	2,829	96.71	29.25	6,432	66.51
Milton	4,065	139.09	29.23	10,759	77.35
Windsor	1,300	47.89	27.15	3,419	71.40
Swanton	2,896	108.27	26.75	6,514	60.17
Springfield	3,470	139.67	24.84	9,044	64.75
Middlebury	2,385	97.76	24.40	8,654	88.52
Rutland Town	1,561	66.22	23.57	4,061	61.32
Rockingham	1,855	79.33	23.38	5,062	63.81
Hartford	4,275	189.89	22.51	9,671	50.93
St. Johnsbury	2,416	117.32	20.59	7,250	61.80
Mendon	564	41.22	13.68	1,022	24.79
Westminster	1,464	112.06	13.07	3,034	27.08
<b>TOTAL</b>	<b>93,555</b>	<b>2,553</b>		<b>279,357</b>	
<b>% of Vermont</b>	33.9%	26.6%		44.7%	

## Approach

1. “Dense areas” are hard to identify conceptually or on the ground. Refocus analysis on existing municipal boundaries that are fixed and familiar to all.
2. In the cases of almost all of the 28 towns containing dense areas of residences, density of the entire municipality is a good proxy for the “dense areas”.
3. Analysis of population located on the total land area or along total road miles in each municipality are easily-understood yardsticks of areal density or linear density.

## Data sources:

1. Road miles: <http://geodata.vermont.gov/datasets/VTrans::vt-road-centerline>
2. Estimated 2016 population: <http://www.healthvermont.gov/health-statistics-vital-records/vital-records-population-data/vermont-population-estimates>
3. Municipal areas: <http://geodata.vermont.gov/datasets/vt-data-e911-specific-town-boundaries>
4. Residential sites: <http://geodata.vermont.gov/datasets/vt-data-e911-site-locations-address-points>