



## **CHITTENDEN SOLID WASTE DISTRICT**

### **2011 HOUSEHOLD SOLID WASTE SURVEY REPORT**

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## **EXECUTIVE SUMMARY**

Opinion Access Corp., an independent market research company based in Long Island City, New York, executed a telephone survey of 402 CSWD households in May and June 2011. The objectives of the survey were to quantify waste management and waste reduction activities, obtain a measure of the public's perception of the waste management system in Chittenden County, and provide information about current public opinion on potential new solid waste programs and/or changes in existing programs. Information from the survey will help guide future facility, program, and policy decisions.

Response frequencies and percentages were calculated for each survey question, and selected cross tabulations and graphs were created. The results of the 2011 survey were compared to results of previous surveys where applicable.

The general findings of the survey are as follows:

- Residents' perception of CSWD continues to be very positive (70.4% of respondents have a positive impression). The percentage of respondents with a negative impression of CSWD remained low (0.7%) and the percentage of those who did not have enough information to form an opinion dropped (9.0%) as compared to the last survey conducted in 2006.
- Opinions on consolidated curbside collection are split (41.3% support, 37.6% oppose).
- There continues to be strong support for a unit-based collection fee program (64.9%).
- Reduce prices was the top answer for suggested improvements to trash disposal and recycling in Chittenden County.
- As compared to the last three surveys, there was little change in the percentage of respondents who indicated they use drop-off centers versus curbside service for their regular trash and recyclables.
- The percentage of curbside customers who use drop-off centers for special wastes remains high (73.8%). If the responses of these customers are combined with the ones of those that use the centers for their regular trash and recyclables, 79.1% of CSWD respondents are using the drop-off centers for regular or special waste services. Use of drop-off centers has increased over time.
- Rating of drop-off center service by those who use them for their regular trash and recyclables remains high (8.9 average on a scale of 1-10).

- The most common suggestions for improvement at drop-off centers were accept more materials for recycling and accept more hazardous waste.
- Most respondents find the drop-off center hours of operation convenient to their schedule (52.7%) or had no opinion (30.1%).
- Respondents continue to rate curbside collection service highly (9.0 average on a scale of 1-10).
- Most of the respondents' employers have a recycling program (90.9%) and one quarter of them have a compost program.
- Participation in recycling remains extremely high (99.5%).
- Participation in backyard composting appears to be at the highest level since data were first collected. Drop-off composting appears to be on an upward trend as well.
- Support for curbside organics collection has grown (61.4%).
- Most residents generate household hazardous waste and properly dispose of it.
- Use of the CSWD web site has almost doubled since 2006.

While CSWD facilities and programs enjoy high participation and residents appear very satisfied with their trash and recycling service, there is room for improvement in District programs. The survey report provides recommendations for staff for operations and educational programs.

# **CHITTENDEN SOLID WASTE DISTRICT 2011 HOUSEHOLD SOLID WASTE SURVEY REPORT**

## **I. INTRODUCTION**

A telephone survey of 402 Chittenden Solid Waste District (CSWD) residents was conducted in May and June of 2011. This report describes the objectives, methodology, and results of the survey and provides some recommendations for staff.

## **II. OBJECTIVES**

Three main objectives were defined for the survey. They are:

### **A. Quantify waste management and waste reduction activities.**

Measuring CSWD residents' use of District programs and their waste reduction efforts helps to answer questions about how well the District is serving the public, how well the public is reducing the amount and toxicity of waste generated over time, and where more consumer education is needed.

### **B. Obtain a measure of the public's perception of the waste management system in Chittenden County.**

Staff is interested in learning how the public views CSWD and its facilities and programs as well as curbside collection service in Chittenden County. This information will help guide future facility, program, and policy decisions.

### **C. Provide information about current public opinion on potential new solid waste programs and/or changes in existing programs.**

This information will also help guide future facility, program, and policy decisions.

## **III. METHODOLOGY**

### **A. Questionnaire Design**

The questionnaire was developed by CSWD staff and reviewed by the market research company hired to conduct the survey. It consists of thirty-four questions including five demographic questions.

### **B. Sample Selection and Data Collection**

The survey was conducted by Opinion Access Corp. (OAC), an independent market research company based in Long Island City, New York. A survey was conducted with every resident 18 years or older who answered the phone and was willing to participate. Four hundred and two surveys were completed, which provides a 95% confidence level with an estimated +/- 5% margin of error.

For the first time in CSWD survey history, households with at least one cell phone and no landline phone (cell-only households) were included. In the past, households were selected from a random sample of Chittenden County households with landline phones. The decision to include cell-only households in the survey was made after an update on their prevalence in the population was published in

April 2011. Prior to this update, the most current estimate was that 5.1% of Vermont households were cell-only. Based on that estimate, two of the three firms that responded to the request for proposals to conduct the survey felt it was not necessary yet to include cell-only households. The more recent study estimates that 20.3% of Vermont households were cell-only during the period July 2009 to June 2010 (Blumberg, et. al., 2011).

The cell-only population has a higher proportion of young adults, males, lower-income households, and renters than exists in the general population (Blumberg, et. al., 2010, Christian, et.al., 2011). As a consequence, if cell-only households are not included in a survey, the results could be affected. It is not known whether differences exist between cell-only households and landline households regarding solid waste management behavior and opinions; however, the Pew Research Center has found some differences, usually 1-3 points, in surveys on political views, social values, cell phone and computer ownership, unemployment experience, and use of social media (Christian, et.al., 2011).

The survey research industry has not yet established best practices for including cell-only households in surveys, but it has been examining the issues, including the added cost. By law, if there is no prior consent, cell phone numbers must be dialed manually instead of automatically using systems employed by market research companies for landline phone numbers. In addition, many more who are contacted are ineligible (e.g., in our case, under 18, not in Chittenden County, not cell-only households). Consequently, it takes much longer to complete surveys, and this adds cost. In 2010, the American Association for Public Opinion Research Cell Phone Task Force reported that the cost per completed interview for cell-only households is approximately two and one-half times more than for landline households.

The cost for including cell-only households in the 2011 CSWD survey was not budgeted. Within budget, OAC was able to include only 26 cell-only households (instead of 80, which would have been the goal to obtain 20% of 400 households). Because of the small number of cell-only households in the survey, we cannot assume that they are representative of all cell-only households. Therefore, no weighting of the sample was done. Including these households in the survey, though, improves the overall representation of households in Chittenden County.

While a random sample of landline and cell-only households was selected for the survey, it doesn't appear to be representative of the general population in Chittenden County according to the 2010 Census on certain demographic characteristics. While representative distributions by geography and income were obtained, men, 18-34 year olds, and renters are underrepresented in the survey. This could be due in part to the underrepresentation of cell-only households. Cross tabulations between these demographic characteristics and the responses to the opinion questions in the survey were run. With the exception of homeownership status and income group for one question, no significant differences were found in how the various groups answered the questions. Regarding questions on waste management activities, we assume the person who answered the phone answered for the household as a whole. This improves our level of confidence in the survey results.

### **C. Data Analysis**

Response frequencies and percentages were calculated for each question. Graphs were created for certain questions to display trends over time. Selected cross tabulations were created, and chi-square tests were conducted to identify statistically significant relationships between variables.

Due to the small numbers of respondents in many of the communities, municipalities were grouped regionally for cross tabulations. Income levels and age groups were similarly collapsed for cross tabulations.

Because some people don't want to admit that they engage in wasteful behavior, even to a stranger, the results for questions regarding waste management activities may have been affected. This is referred to as a response or social desirability bias.

#### **D. Comparisons to Previous Surveys**

The last five household surveys were conducted in 1998 by RVS Enterprises, in 2000 by Action Research, in 2002 by R. J. Peters Associates, in 2004 by RKM Research and Communications, and in 2006 by Opinion Access Research. Some similar or identical questions were asked in the different surveys. Where applicable, the responses for these questions are included below. When comparing responses between years, please keep the +/- 5% margin of error in mind.

### **IV. RESULTS**

#### **A. Data Summaries**

Response frequencies and percentages for the survey questions may be found in Appendix A. Cross tabulations of selected questions are located in Appendix B. Graphs for certain questions are located in Appendix C.

#### **B. Public Perception and Opinions**

Residents' perception of CSWD continues to be very positive. The percentage of respondents with a negative impression of CSWD remained low and the percentage of those who did not have enough information to form an opinion dropped.

Opinions on consolidated curbside collection are split. There continues to be strong support for a unit-based collection fee program. Reduce prices was the top answer for suggested improvements to trash disposal and recycling in Chittenden County.

- 70.4% of residents surveyed said their overall impression of CSWD was positive. Only 0.7% had a negative impression. 9.0% did not have enough information and 19.7% had no opinion or no response.

#### ***Survey Comparison:***

IMPRESSION	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Positive	78.8%	78.6%	85.8%	74.3%	61.3%	70.4%
Negative	2.3%	0.5%	1.5%	1.3%	1.5%	0.7%
Not enough information	16.0%	9.0%	3.6%	10.8%	17.0%	9.0%
Don't know/No opinion	3.0%	11.7%	9.2%	13.8%	20.3%	19.7%

Graph 1 in Appendix C displays these data in a bar chart.

- Relationships were observed between impression of CSWD and homeownership and impression of CSWD and income (see Cross Tabulations Q27 by QC and Q27 by QD in Appendix B on page B1).

While overwhelming majorities of all groups had a positive impression of CSWD, a higher percentage of renters and respondents with under \$25,000 annual household income said they did not have enough information (29.2% and 32.5%, respectively) as compared to homeowners and households with \$25,000 or over in annual household income.

- Relationships were not observed between impression of CSWD and age group, gender, municipal region, or level of education received.
- Respondents with a negative or positive impression were asked if anything specific came to mind that contributed to their impression. The top five responses were:
  - 1) good education/communications/mailings (7.9%)
  - 2) helpful/friendly/thoughtful employees (6.3%)
  - 3) good work/job/service, happy/satisfied (6.0%)
  - 4) great job recycling/accept a lot (4.8%)
  - 5) convenient/easy (4.2%)

42.0% of those surveyed said they didn't know or had no response.

- 41.3% of survey respondents would support consolidated collection of trash and recyclables. 37.6% oppose this type of system. The results show an increase in those opposed and a decrease in those with not enough information or no opinion. No significant relationships were found between opinion on consolidation and age, gender, level of education, income group, municipal region, or housing status.

**Survey Comparison:**

SUPPORT CONSOLIDATION	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Support	58.9%	44.4%	44.3%	41.5%	41.3%
Oppose	21.2%	17.4%	29.8%	31.0%	37.6%
Not enough information	5.0%	9.2%	9.3%	9.8%	6.2%
No opinion/Don't know/No response	14.9%	29.0%	16.8%	17.8%	14.9%

- 64.9% of residents said they would support unit-based collection fees for trash and 17.9% said they would oppose such a system, similar to the last two surveys. No significant relationships were found between opinion on unit-based fees and age, gender, level of education, income group, municipal region, or housing status.

**Survey Comparison:**

SUPPORT UNIT-BASED FEES	<u>2004</u>	<u>2006</u>	<u>2011</u>
Support	61.3%	62.8%	64.9%
Oppose	20.8%	20.5%	17.9%
Not enough information	6.0%	5.0%	4.5%
No opinion/Don't know	12.1%	11.8%	12.7%

- When asked how trash disposal and recycling services in Chittenden County could be improved, the top answers respondents gave were:



- 1) they could not be improved (16.5%)
- 2) make cheaper or free (5.3%)
- 3) provide better/more drop-off center hours (3.6%)
- 4) provide curbside collection of food/yard trimmings/compost (2.9%)
- 5) accept more items for recycling (2.9%)

**Survey Comparison:**

**IMPROVEMENTS**

(includes multiple responses)	<u>2000</u>	<u>2002</u>	<u>2004*</u>	<u>2006</u>	<u>2011</u>
Recycle more items	16.0%	9.9%	27.5%	9.7%	2.9%
More education	9.0%	7.7%	21.5%	3.9%	1.2%
Lower costs/free service	4.0%	5.1%	15.3%	3.4%	5.3%
Better/different collection services	8.7%	6.8%	14.3%	2.4%	1.9%
More hours, sites, improvements at drop-offs	2.7%	2.9%	3.8%	6.5%	3.6%
Provide curbside collection of organics	NA	NA	NA	NA	2.9%
Other	16.7%	15.0%	7.3%	24.4%	24.1%
None needed/No response/Don't know	51.8%	55.6%	32.8%	49.8%	61.1%

\*A change in the survey instrument and interviewer instructions provided by the contractor may have affected the results in 2004. Rather than require interviewers, as for previous surveys, to input each response (which would be coded later), common responses from the previous survey were listed for the interviewer. If the respondent did not seem to have a response, the interviewer was instructed to read the first four responses below. Consequently, the comparability of these data is questionable. In 2006, the survey instrument was changed so that interviewers again inputted each response without reading a list of responses.

**C. Type of Trash Disposal and Recycling Service**

As compared to the last three surveys, there was little change in the percentage of respondents who indicated they use drop-off centers versus curbside service for their regular trash and recyclables.

- 30.3% of the respondents use drop-off centers, and 68.4% use curbside pickup service for their regular trash and recyclables. Although expected, no significant relationship was found between housing status and type of service; therefore, no weighting of variables was done.

**Survey Comparison:**

SERVICE	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Curbside	69.0%	80.5%	72.7%	72.3%	70.8%	68.4%
Drop-Off	28.5%	18.5%	26.3%	26.3%	25.5%	30.3%
Other	1.0%	0.0%	0.7%	1.3%	3.3%	0.2%
Don't know	1.5%	1.0%	0.2%	0.3%	0.5%	1.0%

**D. Drop-Off Centers**

Drop-off centers are well used by residents for regular and special wastes. Rating of drop-off center services by those who use them for their regular trash and recyclables remains high. The Essex Drop-Off Center continues to be the most popular facility. The most common suggestions for improvement at drop-off centers were accept more materials for recycling and accept more hazardous waste. Most respondents find the hours of operation convenient to their schedule or had no opinion.

- 73.8% of curbside customers (50.5% of total respondents) said they use drop-off centers for special wastes, such as yard trimmings, electronics, motor oil, used clothing, bulky items, scrap metal, or

appliances, similar to the results in the last survey. There has been a consistent increase in such use over time. If the responses of these customers are combined with the ones of those that use the centers for their regular trash and recyclables, 80.8% of CSWD respondents are using the drop-off centers for regular or special waste services. Graph 2 in Appendix C displays drop-off center use type by survey year.

**Survey Comparison:**

USE FOR SPECIAL WASTE (curbside customers only)	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Yes	50.7%	57.9%	56.2%	63.5%	72.2%	73.8%
No	46.0%	42.1%	42.2%	35.4%	27.1%	25.1%
Don't know/No response	3.3%	0.0%	1.2%	1.1%	0.8%	1.1%

- On a scale of 1-10, with 10 being the highest, the average rating for trash and recycling services at drop-off centers is 8.9. In previous surveys, respondents were asked to rate trash and recycling services separately.

**Survey Comparison:**

RATING	2002		2004		2006		2011
	<u>Recycling</u>	<u>Trash</u>	<u>Recycling</u>	<u>Trash</u>	<u>Recycling</u>	<u>Trash</u>	<u>Recycling &amp; Trash</u>
1-4	1.8%	0.9%	0.9%	3.2%	2.0%	8.8%	1.6%
5	1.8%	0.9%	0.9%	4.8%	1.0%	2.0%	2.5%
6	0.0%	1.8%	0.9%	3.2%	0.0%	1.0%	0.8%
7	8.3%	4.6%	7.5%	3.2%	7.8%	1.0%	6.6%
8	27.5%	20.2%	16.0%	12.9%	18.6%	4.9%	18.0%
9	26.6%	31.2%	18.9%	16.1%	18.6%	7.8%	19.7%
10	29.4%	29.4%	39.6%	30.6%	46.1%	22.5%	46.7%
Don't know/ No response	4.6%	11.0%	15.1%	25.8%	5.9%	52.0%	4.1%
Average rating	8.7	8.8	9.0	8.5	8.9	7.7	8.9

- 42.9% of respondents who use drop-off centers for their regular trash and recyclables or for special wastes would like to see additional materials collected at or improvements made to the drop-off centers, the most popular of which are accept more materials for recycling and accept more hazardous waste.

**Survey Comparison:**

**IMPROVEMENTS**

(percent of those with suggestions)

(includes multiple responses)

	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Accept more materials for recycling	58.8%	34.3%	21.4%	46.0%	67.3%*
More or different hours	0.0%	5.7%	16.1%	12.6%	4.1%
Permanent/increased haz. waste collection	23.5%	42.9%	32.1%	5.7%	7.7%
Lower prices	11.8%	8.6%	8.9%	4.6%	4.7%
Other	5.9%	8.6%	21.4%	25.3%	26.5%
No response/Don't know	0.0%	0.0%	0.0%	5.7%	1.5%

\*19.4% suggest we take materials that we already accept (e.g., tires, batteries, food scraps, electronics, fluorescent bulbs). The top suggestions from the others were Styrofoam, all/more plastics, and plastic film/bags.

- The Essex Drop-Off Center is used the most by the respondents that use drop-offs for their regular trash and recyclables with Burlington and South Burlington not far behind.

**Survey Comparison:**

SITE	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Burlington	N.A.	N.A.	N.A.	1.0%	8.9%	20.1%
Colchester	11.4%	5.4%	2.8%	9.5%	7.9%	N.A.
Essex	31.6%	24.3%	38.5%	23.8%	25.7%	22.0%
Hinesburg	4.4%	5.4%	6.4%	4.8%	5.9%	5.5%
Milton	7.9%	13.5%	11.0%	14.3%	8.9%	5.2%
Richmond	5.3%	14.9%	8.3%	6.7%	13.9%	10.1%
South Burlington	22.8%	18.9%	19.3%	22.9%	10.9%	19.5%
Williston	16.7%	6.8%	10.1%	10.5%	12.9%	9.5%
CSWD	N.A.	N.A.	N.A.	N.A.	N.A.	2.7%
Other	0.0%	1.4%	0.0%	1.0%	3.0%	1.2%
Don't know/No response	0.0%	9.5%	3.7%	5.8%	2.0%	4.3%

- For the first time, respondents were asked their opinion about drop-off center hours. Most respondents find the hours convenient to their schedule or have no opinion. 14.9% find the hours inconvenient to their schedule. A larger percentage of respondents who use drop-off centers for their regular trash and recyclables than curbside customers find the hours convenient.

**Survey Results:**

DROP-OFF CENTER HOURS	<u>Total</u>	<u>DOC users</u>	<u>Curbside</u>
Convenient to my schedule	52.7%	67.2%	46.2%
Inconvenient to my schedule	14.9%	14.8%	15.3%
No opinion about hours	30.1%	16.4%	36.0%
Don't know/No response	2.2%	1.6%	2.5%

- The 60 respondents who found the drop-off center hours inconvenient were asked how they would change the hours. The top three answers were 1) open more days during the week (34.4%), 2) stay open later/longer (32.8%), and 3) have longer hours on Saturday/weekend (9.8%). A relationship was observed between opinions on hours and trash management choice and use of drop-off centers for special waste (see Cross Tabulations Q8 by Q2 and Q8 by Q3 in Appendix B on page B2). The hours of operation seem to matter less to curbside customers and even less to respondents who don't use the centers for special waste disposal. This makes sense since curbside customers would only use the drop-off centers for special wastes, which is needed less frequently.

#### **E. Curbside Collection**

Respondents continue to rate curbside collection service highly. All Cycle Waste, Gauthier Trucking, and Myers Container Service are still the top three haulers used by respondents.

- On a scale of 1-10, with 10 being the highest, the average rating for curbside trash and recycling services is 9.0. In previous surveys, respondents were asked to rate trash and recycling services separately.

**Survey Comparison:**

RATING	2002		2004		2006		2011
	Recycling	Trash	Recycling	Trash	Recycling	Trash	Recycling & Trash
1-4	1.7%	1.4%	1.4%	0.3%	2.6%	1.1%	2.2%
5	1.3%	2.7%	2.8%	1.0%	3.2%	1.8%	1.5%
6	2.3%	1.0%	0.7%	1.4%	1.8%	1.1%	2.5%
7	8.3%	3.0%	5.5%	2.4%	4.6%	3.9%	6.2%
8	26.2%	23.3%	15.6%	15.3%	14.5%	13.8%	14.9%
9	18.3%	22.3%	16.3%	18.0%	15.2%	17.7%	18.9%
10	38.2%	43.2%	52.2%	56.1%	56.9%	58.3%	52.4%
Don't know/ No response	3.7%	3.4%	5.5%	5.4%	1.4%	2.5%	1.5%
Average rating	8.7	8.9	9.0	9.3	9.0	9.2	9.0

- As in the 2004 and 2006 surveys, the top three haulers used by respondents are All Cycle Waste (33.5%), Gauthier Trucking (14.3%), and Myers Container Service (12.5%).
- 22.1% of respondents who are curbside customers do not know who picks up their trash. One would assume this response would be common among renters and condominium owners, because many landlords and property managers or associations subscribe for trash collection for them. However, 14.7% of curbside customers who own their home did not know who collected their trash. In these cases, it may be that the person who completed the survey was not the person who had subscribed for service and pays that bill.

**F. Waste Diversion at Work**

Most of the respondents' employers have a recycling program and one quarter of them have a compost program.

- 90.9% of respondents who work in Chittenden County said their employer had a recycling program, similar to the results of the last two surveys.

**Survey Comparison:**

RECYCLING AT WORK	2004	2006	2011
Yes	87.1%	92.2%	90.9%
No	7.7%	5.9%	4.8%
Don't know/No response	5.2%	1.8%	4.3%

- For the first time, respondents were asked if their employer had a compost program at work. 24.5% said yes, 60.6% said no, and 14.9% didn't know or didn't respond to the question.

**G. Waste Diversion at Home**

Participation in recycling remains extremely high. Participation in backyard composting appears to be at the highest level since data were first collected. Drop-off composting appears to be on an upward trend as well. Support for curbside organics collection has grown. Due to the effect of the response bias discussed on Page 3, there is the potential that these numbers are inflated.

- 0.5% of respondents (2) said they did not recycle at home, compared to 1.8% in 2004 and 2006. One respondent said he or she did not recycle because there was no facility in the area and the other because “it all ends up in the same place anyway”.
- For the first time, residents were asked what they do with empty bottles and cans that have 5 cent deposits on them. 77.4% of the respondents return them for the deposit back, 17.2% recycle them with their regular recyclables, and 4.0% donate them to a bottle drive or give them away.
- 55.0% of the residents said they compost yard trimmings at home. Homeowners are overrepresented in the survey sample, as noted on Page 2, and are more likely to compost yard trimmings at home than renters (see Cross Tabulation QC by Q18 in Appendix B on page B3). If adjusted for housing status by weighting the variable to match the 2010 Census, 51.8% of respondents compost yard trimmings.
- 43.8% of the residents said they compost food scraps at home.
- 9.7% of the residents said they bring food scraps to a drop-off center.

***Survey Comparison:***

COMPOST PROGRAM	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Compost yard trimmings	33.8%	38.9%	34.3%	37.3%	45.8%	55.0%
Compost food scraps	23.0%	25.9%	24.4%	23.8%	34.0%	43.8%
Drop-off food scraps	NA	NA	NA	5.8%	6.8%	9.7%

Graph 3 in Appendix C displays these data in a bar chart.

- There appears to be a relationship between backyard composting and municipal region (see Cross Tabulations Q1 by Q18 and Q1 by Q19 in Appendix B on pages B3-4). As one might expect, households in more rural regions of the County seem more likely to be backyard composters than households in less rural regions.
- A relationship was also observed between backyard composting and type of service (see Cross Tabulations Q18 by Q2 and Q19 by Q2 in Appendix B on pages B4-5). Residents who use drop-off centers for their regular trash and recyclables appear more likely to compost yard trimmings and food scraps at home.
- As might be expected as a result of convenience, a relationship was observed between whether someone dropped off food scraps and his or her type of trash and recycling service (see Cross Tabulation Q20 by Q2 in Appendix B on page B5). It appears that a drop-off center customer is more likely to use this service than a curbside customer.
- 61.4% of respondents said they would be willing to separate food scraps and non-recyclable paper into a separate container for pickup if there was no additional charge. This represents a healthy increase over the results in 2002, the last time questions about organics collection were asked.

<b>Survey Comparison:</b>			If At No Extra Cost	If At Lower Cost	
ORGANICS PICKUP	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2002</u>	<u>2011</u>
Yes	35.5%	51.4%	42.3%	46.4%	61.4%
No	56.3%	45.9%	42.8%	39.6%	32.1%
Don't know/No response	8.3%	2.7%	15.0%	14.0%	6.5%

No significant relationships were found between willingness to separate organics for pickup and age group, gender, income group, housing status, or level of education completed.

- The 129 respondents who said they would not be willing to separate food scraps for pickup were asked why. The top three reasons were because they compost at home (27.7%), they would worry about attracting rodents/insects/animals (18.2%), and it would be disgusting/yucky/gross (17.6%).

#### H. Hazardous Waste

Most residents generate household hazardous waste and properly dispose of it, similar to earlier surveys.

- Three quarters of respondents said they generate hazardous waste.

<b>Survey Comparison:</b>			
GENERATE HW	<u>2004</u>	<u>2006</u>	<u>2011</u>
Yes	69.5%	75.0%	74.9%
No	29.8%	25.0%	25.1%
Don't know/No response	0.8%	0.0%	0.0%

- Over half of the generators use the Environmental Depot or Rover and 39.4% use a District drop-off center to dispose of the waste. (Please note that when answering “drop-off center”, residents may have been referring to the Environmental Depot or the Rover when it was located at a drop-off center.) There has been a significant jump in the percentage of respondents who say they use the Depot and a drop in those who use the Rover, which may be a result of the shift in focus of promotional campaigns beginning in 2008 or the reduction in the number of Rover visits beginning in 2009.
- 1.2% of respondents versus 3.0% in 2006 and 4.5% in 2004 said they dispose of their hazardous waste in the regular trash or down the drain.

<b>Survey Comparison:</b>			
DISPOSAL METHOD (includes multiple responses)	<u>2004</u>	<u>2006</u>	<u>2011</u>
Drop-Off Center/CSWD	36.3%	41.8%	39.4%
Rover	27.1%	26.4%	20.9%
Environmental Depot	20.3%	23.1%	33.3%
Regular trash	4.2%	2.4%	0.9%
Down the drain	0.3%	0.6%	0.3%
Other	5.9%	2.7%	2.3%
Don't know/No response	5.9%	3.0%	2.9%

## I. Web Site

Use of the CSWD web site has jumped since 2006.

- 44.8% said they had visited CSWD's web site, almost double the number in 2006.

### ***Survey Comparison:***

VISITED WEB SITE	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2011</u>
Yes	3.2%	3.6%	11.5%	23.5%	44.8%
No	96.8%	94.4%	87.8%	75.8%	53.7%
Don't know/No response	0.0%	1.9%	0.8%	0.8%	1.5%

## V. CONCLUSIONS & RECOMMENDATIONS

- In general, CSWD facilities and programs enjoy high participation. Residents appear satisfied with their trash and recycling service, are managing their hazardous waste properly, and most have a positive impression of the District.
- Given that over one quarter of respondents did not have enough information or had no opinion of the District, the District may want to consider adding more information to marketing pieces about its purpose and activities.
- If consolidated collection is pursued, its benefits should be communicated to the public before implementation.
- The large percentage of respondents that support unit-based trash collection fees suggests that CSWD would be successful if it pursues this program, however, advance education on the benefits of such a system should be undertaken.
- CSWD should continue to work on adding materials to its collection programs that can be reused or recycled.
- Additional promotion of the diverse list of special wastes accepted at drop-off centers should be undertaken.
- It appears that most businesses are in compliance with mandatory recycling.
- Participation in organics diversion has grown. Consideration of residential curbside organics collection should continue.
- CSWD should continue to provide technical assistance to businesses to add compost collection programs.
- CSWD should focus future promotion of backyard and drop-off composting on residents with curbside collection service for regular trash and recyclables and on those in the more densely populated areas of the County.

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## APPENDIX A

### Chittenden Solid Waste District 2011 Household Solid Waste Survey RESPONSE FREQUENCIES & PERCENTAGES BY QUESTION

**NOTES:**

In some cases, the interviewers coded a response as "other" due to lack of knowledge, when in fact it was one of the listed responses. These cases were recoded. However, if there was a followup question(s) for specific responses, the respondents who were coded as "other" may not have been asked the question(s). Consequently, the total respondents asked in the followup question(s) may not correspond to the specific responses in the previous question.

Respondent Type	#	%
Cell phone only households	26	6.5%
Landline households	376	93.5%
TOTAL	402	100.0%

**Q.1 What town or city do you reside in?**

Response	#	%	2010 Census
Bolton	0	0.0%	0.8%
Buel's Gore	1	0.2%	0.0%
Burlington	100	24.9%	27.1%
Charlotte	15	3.7%	2.4%
Colchester	32	8.0%	10.9%
Essex Junction	36	9.0%	5.9%
Essex Town	18	4.5%	6.6%
Hinesburg	18	4.5%	2.8%
Huntington	9	2.2%	1.2%
Jericho	25	6.2%	3.2%
Milton	20	5.0%	6.6%
Richmond	10	2.5%	2.6%
Shelburne	16	4.0%	4.6%
South Burlington	42	10.4%	11.4%
St. George	3	0.7%	0.4%
Underhill	12	3.0%	1.9%
Westford	4	1.0%	1.3%
Williston	31	7.7%	5.6%
Winooski	10	2.5%	4.6%
TOTAL	402	100.0%	100.0%

**Q.2 For your household trash and recycling, do you have a hauler who provides curbside pickup or do you use a drop-off center?**

Response	#	%
Curbside	275	68.4%
Drop-off	122	30.3%
Other	1	0.2%
Don't know/No response	4	1.0%
TOTAL	402	100.0%

Q.3 Do you ever use a drop-off center for special wastes, such as yard trimmings, electronics, motor oil, used clothing, bulky items, scrap metal, or appliances?

Response	#	%
Yes	312	77.6%
No	87	21.6%
Don't know/No response	3	0.7%
TOTAL	402	100.0%

Q.4 Which drop-off center do you usually use?

Asked only of Q2=Drop-off or Q3=yes.

Response	#	%
Essex	72	22.0%
Burlington	66	20.1%
South Burlington	64	19.5%
Richmond	33	10.1%
Williston	31	9.5%
Hinesburg	18	5.5%
Milton	17	5.2%
CSWD	9	2.7%
Other	4	1.2%
Don't know/No response	14	4.3%
TOTAL	328	100.0%

Q.5 Which hauler or trash collection company picks up your trash?

Asked only of those who use curbside service for their regular trash and recycling.

Response	#	%
All Cycle Waste/Casella	91	33.5%
Gauthier Trucking Company	39	14.3%
Myers Container	34	12.5%
Clean Green Sanitation	11	4.0%
Tourville Trucking	10	3.7%
City of Burlington	4	1.5%
Greg's Trucking	4	1.5%
Trashaway & Recycling Service	4	1.5%
Ben's Trucking	3	1.1%
Barnier Waste	2	0.7%
Decker Trucking	1	0.4%
Nolin's Trucking	1	0.4%
The county	1	0.4%
Other	2	0.7%
Don't know	60	22.1%
No response	5	1.8%
TOTAL	272	100.0%

Q.6 On a scale of 1 to 10, with 10 being the highest, how would you rate the trash and recycling service you receive?

Response	#	%
10-Highest rating	203	50.5%
9	77	19.2%
8	64	15.9%
7	24	6.0%
6	8	2.0%
5	7	1.7%
4	3	0.7%
3	3	0.7%
2	2	0.5%
1-Lowest rating	1	0.2%
Don't know/No response	10	2.5%
TOTAL	402	100.0%
Average rating	9.0	

Curbside Respondents		
Response	#	%
10-Highest rating	144	52.4%
9	52	18.9%
8	41	14.9%
7	17	6.2%
6	7	2.5%
5	4	1.5%
4	2	0.7%
3	1	0.4%
2	2	0.7%
1-Lowest rating	1	0.4%
Don't know/No response	4	1.5%
TOTAL	275	100.0%
Average rating	9.0	

Drop-Off Respondents		
Response	#	%
10-Highest rating	57	46.7%
9	24	19.7%
8	22	18.0%
7	8	6.6%
6	1	0.8%
5	3	2.5%
4	0	0.0%
3	2	1.6%
2	0	0.0%
1-Lowest rating	0	0.0%
Don't know/No response	5	4.1%
TOTAL	122	100.0%
Average rating	8.9	

Q.7 What additional materials would you like to be able to recycle or improvements would you like to see at drop-off centers?

Multiple responses permitted.

Response	#	%
Can't think of any/None/Happy as is	172	38.2%
Accept additional materials:		
Styrofoam	16	3.6%
More hazardous waste <sup>1</sup>	15	3.3%
All/more plastics	12	2.7%
More recyclables (in general)	10	2.2%
Plastic film/bags	7	1.6%
Items that are already accepted	38	8.4%
Other items (1-3 responses each) <sup>2</sup>	34	7.6%
Service:		
Better/more/different hours	8	1.8%
More frequent HW/Rover at DOCS	5	1.1%
Other (1-2 responses each) <sup>3</sup>	27	6.0%
Cost:		
Lower prices	6	1.3%
Free/more frequent free tires	4	0.9%
Free	3	0.7%
Other	3	0.7%
Response not clear	5	1.1%
Don't know/No response	85	18.9%
TOTAL	450	100.0%

<sup>1</sup>e.g., paint, gas, chemicals

<sup>2</sup>e.g., carpet, phonographs, bottle caps, milk/juice cartons, freezer boxes, construction materials, all glass, pills

<sup>3</sup>e.g., bottle redemption, faster, pick up service for clothing/bulky items/hazardous waste/compost, more ReUse Zones

Q.8 Which of the following statements would you say most closely reflects your opinion?

Response	#	%
The drop-off center hours of operation are convenient to my schedule.	212	52.7%
The drop-off center hours of operation are inconvenient to my schedule.	60	14.9%
I have no opinion about drop-off center hours.	121	30.1%
Don't know/No response	9	2.2%
TOTAL	402	100.0%

Q.9 How would you change the drop-off center hours of operation to make them more convenient to your schedule?  
 Asked only of those who said the hours were inconvenient.  
 Multiple responses permitted.

Response	#	%
Open more days during the week	21	34.4%
Open later/longer	20	32.8%
Longer hours on Saturday/weekend	6	9.8%
Open regular business hours	4	6.6%
Open on Sundays	4	6.6%
Open earlier	3	4.9%
Other	2	3.3%
Don't know	1	1.6%
TOTAL	61	100.0%

Q.10 The next question is about curbside collection of trash and recyclables. In most cases in Chittenden County, you can choose which hauler comes to your home to pick up your trash and recyclables. Many other communities (including some in Vermont) have chosen to assign routes to specific haulers through a bidding process, so that only one hauler services a given neighborhood. The goal of this type of system is to reduce fuel and other costs, truck emissions, and the impact of trucks on the roads; however, you would no longer have a choice of haulers. Would you support or oppose this type of system?

Response	#	%
Support	166	41.3%
Oppose	151	37.6%
Not enough information	25	6.2%
No opinion	46	11.4%
Don't know/No response	14	3.5%
TOTAL	402	100.0%

Q.11 Do you currently recycle at home?

Response	#	%
Yes	400	99.5%
No	2	0.5%
TOTAL	402	100.0%

Q.12 Can you tell me why you do not recycle?  
 Asked only of those who said they do not currently recycle at home.

Response	#	%
No facility in area	1	50.0%
All ends up in the same place	1	50.0%
TOTAL	2	100.0%

Q.13 Many communities have established fees for trash collection based on how many bags or trash cans a household sets out for collection instead of each customer paying their hauler the same amount. For example, if you set out two bags of trash each week, you would pay less than a neighbor who set out four bags each week. There would be no charge for recyclables. Would you support or oppose this type of trash fee system for Chittenden County?

Response	#	%
Support	261	64.9%
Oppose	72	17.9%
Not enough information	18	4.5%
No opinion	31	7.7%
Don't know	20	5.0%
TOTAL	402	100.0%

Q.14 Do you work outside the home?

Response	#	%
Yes	242	60.2%
No	160	39.8%
TOTAL	402	100.0%

Q.15 What town or city do you work in?

Asked only of those who work outside the home.

Response	#	%
Burlington	78	32.2%
Charlotte	3	1.2%
Colchester	14	5.8%
Essex Junction	23	9.5%
Essex Town	6	2.5%
Hinesburg	3	1.2%
Jericho	4	1.7%
Milton	5	2.1%
Richmond	5	2.1%
Shelburne	9	3.7%
South Burlington	31	12.8%
Williston	23	9.5%
Winooski	4	1.7%
Other	34	14.0%
TOTAL	242	100.0%

Q.16 Does your employer have a recycling program at work?

Asked only of those who work in Chittenden County.

Response	#	%
Yes	189	90.9%
No	10	4.8%
Don't know/No response	9	4.3%
TOTAL	208	100.0%

Q.17 Does your employer have a compost program at work?  
 Asked only of those who work in Chittenden County.

Response	#	%
Yes	51	24.5%
No	126	60.6%
Don't know/No response	31	14.9%
TOTAL	208	100.0%

Q.18 Do you compost yard trimmings at home?

Response	#	%
Yes	221	55.0%
No	177	44.0%
Don't know	4	1.0%
TOTAL	402	100.0%

Q.19 Do you compost food scraps at home?

Response	#	%
Yes	176	43.8%
No	222	55.2%
Don't know/No response	4	1.0%
TOTAL	402	100.0%

Q.20 Do you bring food scraps to a Drop-Off Center for composting?

Response	#	%
Yes	39	9.7%
No	359	89.3%
Don't know/No response	4	1.0%
TOTAL	402	100.0%

Q.21 If curbside collection of food scraps, such as vegetable peelings, meat, coffee grounds, table scraps, was available to you at no additional charge, would you be willing to separate these items into a separate bag or container for pickup?

Response	#	%
Yes	247	61.4%
No	129	32.1%
Don't know/No response	26	6.5%
TOTAL	402	100.0%

Q.22 Why would you not want to separate food scraps for curbside collection?

Asked only of those who would not want to separate food scraps.

Multiple responses permitted.

Response	#	%
Compost at home	41	27.7%
Would worry about attracting rodents/insects/animals	27	18.2%
Would be disgusting/yukky/gross	26	17.6%
Use a garbage disposal	11	7.4%
Would take too much time	9	6.1%
Extra work/inconvenient/hassle	6	4.1%
Don't have curbside collection	5	3.4%
Other	18	12.2%
No response	5	3.4%
TOTAL	148	100.0%

Q.23 What do you do with empty bottles and cans that have 5 cent deposits on them?

Response	#	%
Return to store/redemption center for deposit back	311	77.4%
Recycle/include with regular recyclables	69	17.2%
Donate to bottle drive	12	3.0%
Give away	4	1.0%
Throw in the trash	1	0.2%
Other	3	0.7%
Don't know/No response	2	0.5%
TOTAL	402	100.0%

Q.24 Do you ever have leftover hazardous products such as paint, motor oil, pesticides, or household cleaners?

Response	#	%
Yes	301	74.9%
No	101	25.1%
TOTAL	402	100.0%

Q.25 How do you dispose of leftover hazardous products?

Asked only of those who had leftover hazardous products.

Multiple responses permitted.

Response	#	%
Bring to Drop-Off Center	136	39.4%
Bring to Environmental Depot	115	33.3%
Bring to Rover	72	20.9%
Put in regular trash	3	0.9%
Put down the drain	1	0.3%
Other	8	2.3%
Don't know	10	2.9%
TOTAL	345	100.0%



Q.26 Have you ever visited Chittenden Solid Waste District's web site?

Response	#	%
Yes	180	44.8%
No	216	53.7%
Don't know	6	1.5%
TOTAL	402	100.0%

Q.27 What is your overall impression of the Chittenden Solid Waste District?

Response	#	%
Positive	283	70.4%
Negative	3	0.7%
Not enough information	36	9.0%
No opinion	79	19.7%
No response	1	0.2%
TOTAL	402	100.0%

Q.28 Does anything specific come to mind that contributes to this impression?

Asked only of those who had a positive or negative impression.

Multiple responses permitted.

Response	#	%
Good education/communications/mailings	26	7.9%
Helpful/friendly/thoughtful employees	21	6.3%
Good work/job/service, happy/satisfied	20	6.0%
Great job recycling/accept a lot	16	4.8%
Convenient/easy	14	4.2%
Organized/clean	8	2.4%
Good/great web site	7	2.1%
Convenient/good hours	7	2.1%
Convenient/good locations	6	1.8%
Employees are conscientious/work hard	6	1.8%
Other	61	18.4%
Don't know/No response	139	42.0%
TOTAL	331	100.0%

Q.29 How could trash disposal and recycling services in Chittenden County be improved?  
Multiple responses permitted.

Response	#	%
Cheaper/free	22	5.3%
Better/more drop-off center hours	15	3.6%
Curbside food/yard debris/compost	12	2.9%
Accept more items for recycling	12	2.9%
Carts for recycling or trash	8	1.9%
Consistent/less/more/different/same day collection	8	1.9%
Bulky/special waste pickup	7	1.7%
More convenient haz waste collection	6	1.4%
More education	5	1.2%
Closer/more facilities	5	1.2%
Municipal/consolidated collection	4	1.0%
Financial incentive/user-based rates	4	1.0%
More public awareness/participation	4	1.0%
They could not be improved/satisfied	69	16.5%
Other	31	7.4%
Response not clear	20	4.8%
Don't know/No response	187	44.6%
TOTAL	419	100.0%

#### DEMOGRAPHIC QUESTIONS

For comparison purposes, 2010 US Census figures are shown where available, and 2009 Census estimates where they are not.

Q.A In which of the following age brackets do you fit?

Response	#	%	2010
			Census
18 to 24	12	3.0%	19.3%
25 to 34	22	5.5%	16.5%
35 to 44	48	11.9%	15.9%
45 to 54	89	22.1%	19.4%
55 to 64	118	29.4%	14.8%
65 to 74	61	15.2%	7.5%
75 to 84	38	9.5%	4.5%
85 or older	11	2.7%	2.1%
No response	3	0.7%	
TOTAL	402	100.0%	100.0%

Q.B What is the highest level of education that you have completed?  
Comparable Census data not available.

Response	#	%
Some high school (9-11)	10	2.5%
High school graduate	58	14.4%
Technical school/degree	14	3.5%
Some college	63	15.7%
Associate's degree	39	9.7%
Bachelor's degree	102	25.4%
Some graduate school	11	2.7%
Graduate degree	103	25.6%
No response	2	0.5%
TOTAL	402	100.0%

Q.C Do you own or rent your home?

Response	#	%	2010
			Census
Own	323	80.3%	71.4%
Rent	71	17.7%	28.6%
Other	5	1.2%	
No response	3	0.7%	
TOTAL	402	100.0%	100.0%

Q.D Which of the following ranges best describes your combined annual household income?

Response	#	%	2009
			Census
Less than \$10,000	11	2.7%	5.3%
\$10,000 to \$14,999	18	4.5%	4.9%
\$15,000 to \$24,999	25	6.2%	8.5%
\$25,000 to \$34,999	25	6.2%	8.7%
\$35,000 to \$49,999	35	8.7%	13.7%
\$50,000 to \$74,999	57	14.2%	20.9%
\$75,000 to \$99,999	38	9.5%	14.3%
\$100,000 to \$149,999	56	13.9%	14.5%
\$150,000 to \$199,999	13	3.2%	5.2%
\$200,000 or more	7	1.7%	4.0%
No response	117	29.1%	
TOTAL	402	100.0%	100.0%

Q.E Respondent's sex (by observation)

Total Respondents	#	%	2010
			Census
Male	150	37.3%	48.1%
Female	252	62.7%	51.9%
TOTAL	402	100.0%	100.0%



## APPENDIX B

### Chittenden Solid Waste District 2011 Household Solid Waste Survey CROSS TABULATIONS

#### Q27 by QC

##### Impression of CSWD by Housing Status

Q27 What is your overall impression of the Chittenden Solid Waste District?

QC Do you own or rent your home?

Impression of CSWD	Own	Rent	TOTAL
Positive	246 91.1%	34 70.8%	280 88.1%
Negative	2 0.7%	0 0.0%	2 0.6%
Not enough info	22 8.1%	14 29.2%	36 11.3%
TOTAL	270 100.0%	48 100.0%	318 100.0%

Excludes no response and "No opinion" responses to the Impression of CSWD question and the no response and "Other" responses to the housing status question.

Probability of chi-square = .0001

Expected value cells < 5 = 33%

#### Q27 by QD

##### Impression of CSWD by Income Group

Q27 What is your overall impression of the Chittenden Solid Waste District?

QD Which of the following ranges best describes your combined annual household income?

Impression of CSWD	Under \$25,000	\$25,000 - \$74,999	\$75,000 - and over	TOTAL
Positive	27 67.5%	86 90.5%	91 92.9%	113 83.7%
Negative	0 0.0%	0 0.0%	2 2.0%	0 0.0%
Not enough info	13 32.5%	9 9.5%	5 5.1%	22 16.3%
TOTAL	40 100.0%	95 100.0%	98 100.0%	135 100.0%

Excludes no response and "No opinion" responses to the Impression of CSWD question and the no response to the income group question.

Probability of chi-square = <.0001

Expected value cells < 5 = 44%

## Q8 by Q2

### Opinion on Drop-Off Center Hours by Type of Service

Q8 Which of the following statements would you say most closely reflects your opinion?

Q2 For your household trash and recycling, do you have a hauler who provides curbside pickup or do you use a drop-off center?

Opinion on Hours	Curbside	Drop-Off	TOTAL
Convenient	127 47.4%	82 68.3%	209 53.9%
Inconvenient	42 15.7%	18 15.0%	60 15.5%
No opinion	99 36.9%	20 16.7%	119 30.7%
TOTAL	268 100.0%	120 100.0%	388 100.0%

Excludes no response and "Don't know" responses for both questions and "Other" for Type of Service.

Probability of chi-square = .0001

Expected value cells < 5 = 0%

## Q8 by Q3

### Opinion on Drop-Off Center Hours by Use of Drop-Off Centers for Special Wastes

Q8 Which of the following statements would you say most closely reflects your opinion?

Q3 Do you ever use a drop-off center for special wastes, such as yard trimmings, electronics, motor oil, used clothing, bulky items, scrap metal, or appliances?

Opinion on Hours	Use for Special Wastes		TOTAL
	Yes	No	
Convenient	189 61.2%	23 28.4%	212 54.4%
Inconvenient	54 17.5%	6 7.4%	60 15.4%
No opinion	66 21.4%	52 64.2%	118 30.3%
TOTAL	309 100.0%	81 100.0%	390 100.0%

Excludes no response and "Don't know" responses for both questions.

Probability of chi-square = <.0001

Expected value cells < 5 = 0%

## QC by Q18

### Housing Status by Compost Yard Trimmings

QC Do you own or rent your home?

Q18 Do you compost yard trimmings at home?

Housing Status	Compost Yard Trimmings		TOTAL
	Yes	No	
Own	194 90.2%	127 72.6%	321 82.3%
Rent	21 9.8%	48 27.4%	69 17.7%
TOTAL	215 100.0%	175 100.0%	390 100.0%

Excludes no response and "Other" responses for Housing Status question and "Don't know" responses for Compost Yard Trimmings question.

Probability of chi-square = <.0001

Expected value cells < 5 = 0%

## Q1 by Q18

### Municipal Region by Compost Yard Trimmings

Q1 What town or city do you reside in?

Q18 Do you compost yard trimmings at home?

Municipal Region	Compost Yard Trimmings		TOTAL
	Yes	No	
Region 1	50 70.4%	21 29.6%	71 100.0%
Region 2	66 44.0%	84 56.0%	150 100.0%
Region 3	26 50.0%	26 50.0%	52 100.0%
Region 4	46 54.8%	38 45.2%	84 100.0%
Region 5	33 80.5%	8 19.5%	41 100.0%
TOTAL	221 55.5%	177 44.5%	398 100.0%

Region 1 = Buel's Gore, Charlotte, Hinesburg, Huntington, St. George, Richmond, Shelburne

Region 2 = Burlington, So. Burlington, Winooski

Region 3 = Colchester, Milton,

Region 4 = Essex, Essex Junction, Williston

Region 5 = Bolton, Jericho, Underhill, Westford

Excludes "Don't know" responses to the Compost Yard Trimmings question.

Probability of chi-square = <.0001

Expected value cells < 5 = 0%

## Q1 by Q19

### Municipal Region by Compost Food Scraps

Q1 What town or city do you reside in?

Q19 Do you compost food scraps at home?

Municipal Region	Compost Food Scraps		TOTAL
	Yes	No	
Region 1	43 60.6%	28 39.4%	71 100.0%
Region 2	50 33.6%	99 66.4%	149 100.0%
Region 3	21 40.4%	31 59.6%	52 100.0%
Region 4	33 38.8%	52 61.2%	85 100.0%
Region 5	29 70.7%	12 29.3%	41 100.0%
TOTAL	176 44.2%	222 55.8%	398 100.0%

Region 1 = Buel's Gore, Charlotte, Hinesburg, Huntington, St. George, Richmond, Shelburne

Region 2 = Burlington, So. Burlington, Winooski

Region 3 = Colchester, Milton,

Region 4 = Essex, Essex Junction, Williston

Region 5 = Bolton, Jericho, Underhill, Westford

Excludes no response and "Don't know" responses to the Compost Food Scraps question.

Probability of chi-square = <.0001

Expected value cells < 5 = 0%

## Q18 by Q2

### Compost Yard Trimmings by Type of Service

Q18 Do you compost yard trimmings at home?

Q2 For your household trash and recycling, do you have a hauler who provides curbside pickup or do you use a drop-off center?

Compost Yard Trimmings	Curbside	Drop-Off	TOTAL
Yes	137 50.6%	84 68.9%	221 56.2%
No	134 49.4%	38 31.1%	172 43.8%
TOTAL	271 100.0%	122 100.0%	393 100.0%

Excludes no response and "Other" and "Don't know" responses to the Type of Service question and the "Don't know" responses to the Compost Yard Trimmings question.

Probability of chi-square = <.001

Expected value cells < 5 = 0%



**Q19 by Q2****Compost Food Scraps by Type of Service**

Q19 Do you compost food scraps at home?

Q2 For your household trash and recycling, do you have a hauler who provides curbside pickup or do you use a drop-off center?

Compost Food Scraps	Curbside	Drop-Off	TOTAL
Yes	110 40.4%	66 54.5%	176 44.8%
No	162 59.6%	55 45.5%	217 55.2%
TOTAL	272 100.0%	121 100.0%	393 100.0%

Excludes no response and "Other" and "Don't know" responses to the Type of Service question and no response and "Don't know" responses to the Compost Food Scraps question.

Probability of chi-square = <.01

Expected value cells < 5 = 0%

**Q20 by Q2****Drop Off Food Scraps by Type of Service**

Q20 Do you bring food scraps to a Drop-Off Center for composting?

Q2 For your household trash and recycling, do you have a hauler who provides curbside pickup or do you use a drop-off center?

Drop Off Food Scraps	Curbside	Drop-Off	TOTAL
Yes	17 6.2%	22 18.3%	39 9.9%
No	256 93.8%	98 81.7%	354 90.1%
TOTAL	273 100.0%	120 100.0%	393 100.0%

Excludes no responses and "Other" and "Don't know" responses to the Type of Service question and the "Don't know" responses to the Drop Off Food Scraps question.

Probability of chi-square = <.0001

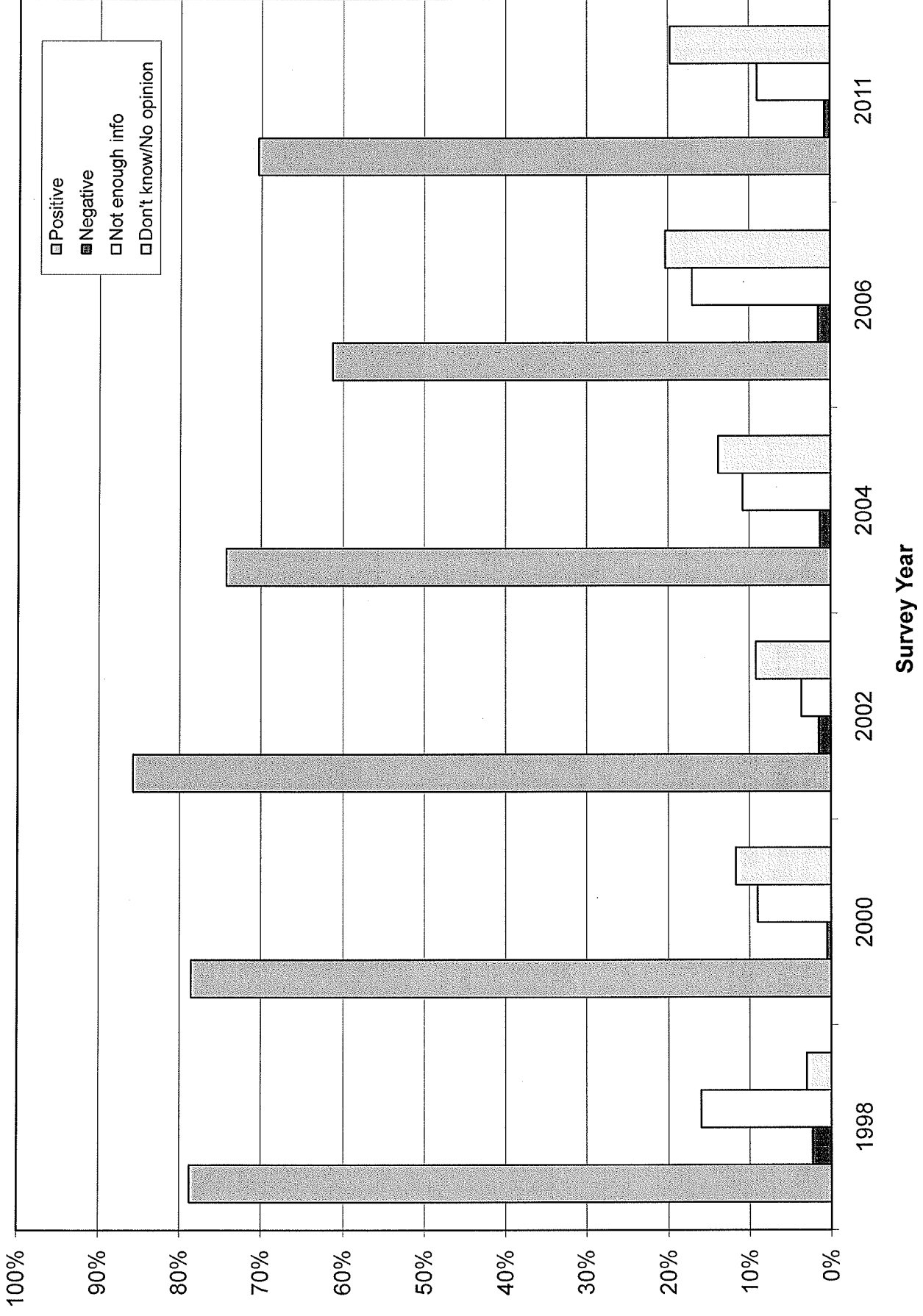
Expected value cells < 5 = 0%



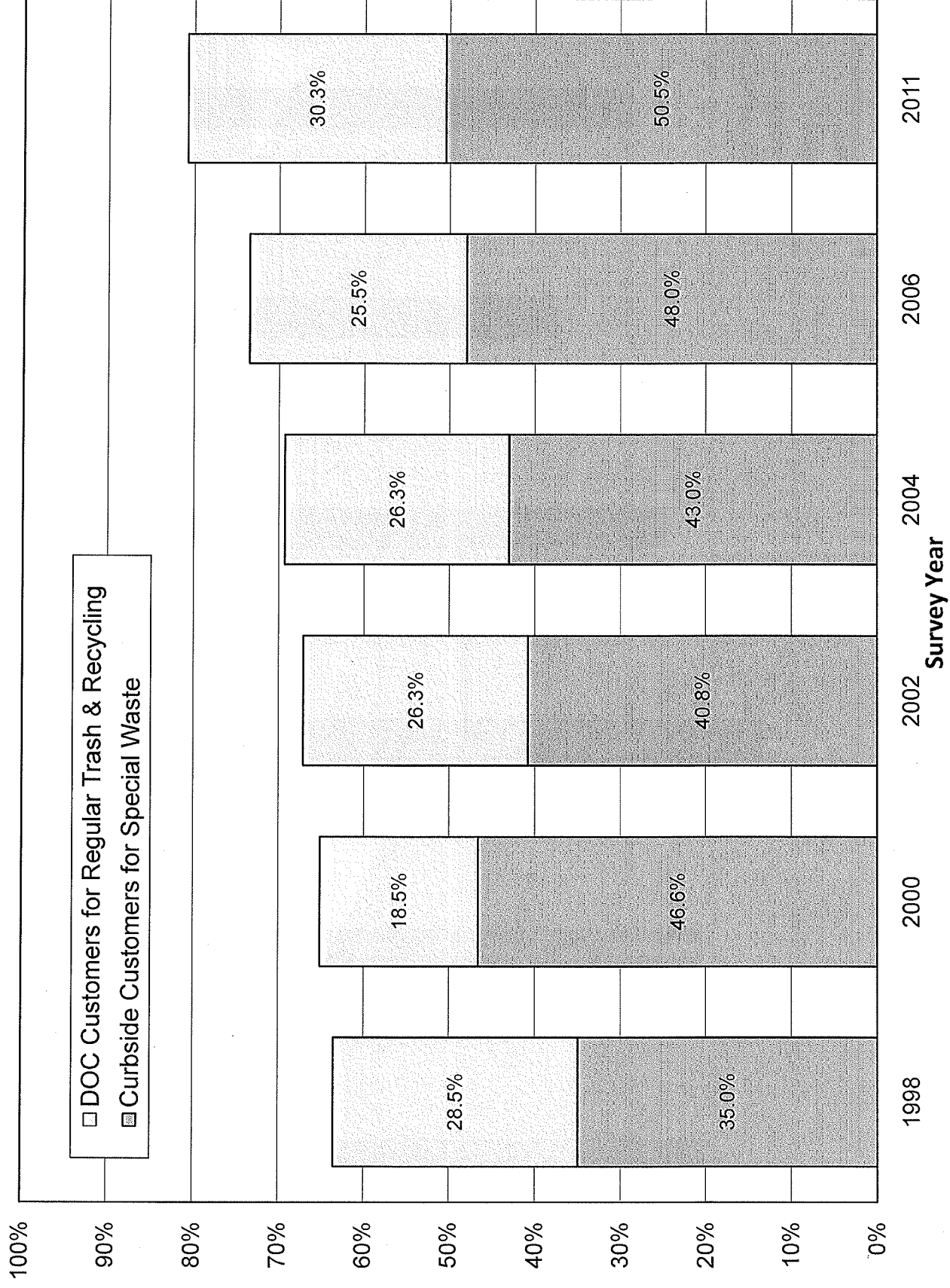
## APPENDIX C

### Chittenden Solid Waste District 2011 Household Solid Waste Survey

GRAPH 1: IMPRESSION OF CSWD



**GRAPH 2: DROP-OFF CENTER USE**



**GRAPH 3: COMPOST ACTIVITIES**

