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# Litter Strategy Monitoring Wave 49 – May 2010 Report

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On behalf of: KESAB Environmental Solutions  
Project No: 7239  
Date: May 2010

# ***CONTENTS***

<b>Section 1 Introduction .....</b>	<b>1</b>
<b>Section 2 Wave 49 Executive Summary.....</b>	<b>5</b>
Items Counted .....	6
Litter Volume.....	10
3.1 Glass .....	13
Items.....	13
Volume .....	14
3.2 Metal .....	15
Items.....	15
Volume .....	16
3.3 Plastic.....	17
Items.....	17
Volume .....	18
3.4 Paper/ Paperboard.....	19
Items.....	19
Volume .....	20
3.5 Miscellaneous .....	21
Items.....	21
Volume .....	22
3.6 Cigarette Butts .....	23
Items.....	23
Volume .....	24
3.7 Dispersion of Litter by Site Type .....	25
Items.....	25
Volume .....	28
3.8 CDL Beverage Containers .....	29
 <b>Data Summary - Items.....</b>	 <b>30</b>
 <b>Data Summary - Volumes .....</b>	 <b>34</b>
 <b>Appendix 1: Tracking Graphs .....</b>	 <b>38</b>
 <b>Unweighted Tracking Graphs - Items.....</b>	 <b>45</b>
 <b>Unweighted Tracking Graphs - Volume .....</b>	 <b>60</b>

**Weighted Tracking Graphs - Items ..... 68**

**Weighted Tracking Graphs - Volumes ..... 79**

**Appendix 2: Data Collection Form ..... 86**

For enquiries on this report please contact Zing Hai Tan or David O'Dea.

# *Section 1*

## *Introduction*

This document has been prepared by McGregor Tan Research to report on Wave 49 of the quarterly KESAB Litter Monitor. Surveys for the current Wave were conducted in South Australia during May 2010.

## **Background**

Regular monitoring of the litter stream is necessary in order to maintain a clear picture of its components, such as the various material types that contribute to the litter stream as well as the distribution of litter across different area types. Keep South Australia Beautiful (KESAB) had been monitoring the State's litter stream for many years, but the level of detail required during the South Australian Government's moratorium on changes to Container Deposit Legislation was considerably greater than previously recorded.

An expanded monitoring program commenced in February 1998, and McGregor Tan Research was commissioned at that time to undertake the actual count and to report regularly on the outcomes. This expanded program was continued throughout 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 and is planned to continue.

With the exception of August 2002, counts have been conducted quarterly, carried out in February, May, August and November of each year. Throughout the Monitor, care has been taken to maintain the data in a form compatible with KESAB's requirements.

During each Wave of the survey, litter counts are undertaken at 151 sites across South Australia. In conjunction with the national litter count, a review of all South Australian sites showed that 11 of the sites surveyed were disproportionately represented in the data. These original sites were found to be unusual in nature, and were replaced with 11 revised sites.

The data collection form utilised for the count was jointly developed by McGregor Tan Research and KESAB. A copy of this form is provided in Appendix 2.

In January 2003, Container Deposit Legislation (CDL) was extended to cover most beverages under 1 litre, such as juice cartons, fruit boxes, flavoured milk cartons, etc. As a result, a new method of analysing the data had to be adopted so that the changes to the CDL, and the effect on the total litter stream could be evaluated.

Prior to the August 2004 Litter Count, the data collection form was re-evaluated and re-designed to take into account the changes to the CDL and also to incorporate new categories for litter items that were previously coded as 'other' or in an inappropriate category. The changes that were made to the data collection form include:

- Plastic bags were separated into 3 types of litter:
  - Supermarket type lightweight shopping bags
  - Heavier glossy, typically branded carry bags
  - Sacks, sheeting and other bags
- Bottle and can tops were moved and separated from the Miscellaneous Category into both 'plastic bottle top' and 'metal bottle and can tops'.
- The following four litter types were also added to the Plastic category:
  - Bread bag tags
  - Lollipop sticks
  - Spoons/ cutlery
  - Drink pouches
- The Metal Cans category name was changed to Metal.
- Foil take away was moved from Miscellaneous to Metal.
- Cigarette butts were separated from the Miscellaneous Category.
- Two extra items were added to the Paper/paperboard category:
  - Paper bags
  - Shopper docket & related shopping paper

In previous waves, the data collection form separated each litter type into CDL and non-CDL categories. However, extended Container Deposit Legislation (CDL) has now meant that the litter categories alone (e.g. Flavoured milk, < 1 litre) can be used to establish whether or not beverage containers are covered under CDL or not.

In order to determine the effectiveness of the current CDL (as of January 2003), and for comparative purposes, it was necessary to re-calculate the number of current CDL items from the waves prior to the extension. References to CDL items in Waves prior to Wave 17 (waves 1-16) therefore denote beverage containers that are *currently* covered by CDL – not the items that *were* covered by the legislation prior to this time.

During the Wave 29 Monitor estimates of the volumes for each litter item category were defined. The assignments of volume estimates to each litter item category were based on actual measurements of containers/ items, the condition that these items were most commonly

found (which was based on the audits of at least three Waves), and the most common or average size of the items that were found within each category.

The auditors were an important part of the volume formulation process, and these persons were able to record the number, size and type of different items within each category over a number of waves. Volumes ascribed to each item represented the average size for that category across all site types.

The final volume attributed to each litter item category furthermore took into account the fact that some items were often found crushed and weathered. For example, some drink cans and cartons are often crushed and/ or weathered when they are identified by the auditors and counted. The same volume measurements have been used for all subsequent Waves.

Two noteworthy events that have taken place since the beginning of this longitudinal study include:

- The deposit on drink containers was increased from 5 cents to 10 cents in September 2008.
- The ban on thin plastic shopping bags came into affect in May 2009.

This document reports on Wave 49 of the longitudinal study. The litter count was conducted during May 2010. Section 2 of this report outlines the litter characteristics of the 151 sites, which include 11 revised sites (replacing 11 of the original 151). Appendix 1 contains charts tracking results back across all prior Monitors, and includes weighted results to facilitate meaningful comparison of results established at the 151 original sites with results derived from the 151 revised sites.

## *Section 2*

### *Wave 49*

## *Executive Summary*

The following Executive Summary covers the findings of the May 2010 (Wave 49) KESAB Litter Monitor. Where possible, results have been tracked against those derived from any previous Waves which incorporated revised sites. All 151 sites were counted during the May 2010 count.

### Items Counted

A total of 14,159 litter items were counted across the 151 South Australian sites during Wave 49. These figures are above those from the previous monitor in February 2010 (13,124) and the November 2009 monitor (12,322) but below those from the August 2009 monitor (14,539) and the monitor conducted at the same time last year in May 2009 (14,433).

Cigarette butts remained the main contributor (42%) to the litter count up from 5,594 in Wave 48 to 5,927 in wave 49, also above the 4,764 counted at the same time last year in May 2009 in Wave 45.

The decrease in items counted in Wave 49 is demonstrated most strongly amongst the following litter items:

- PLASTIC - Plastic bottle tops – 233 items, down from 280 items in Wave 48 (17% decrease)
- METAL - Metal pieces – 145 items, down from 188 items in Wave 48 (23% decrease)
- MISCELLANEOUS - Clothing & materials – 182 items, down from 213 items in Wave 48 (15% decrease)
- PLASTIC - Spoons/cutlery – 55 items, down from 84 items in Wave 48 (35% decrease)
- PAPER/PAPERBOARD - Junk mail/free circulars – 72 items, down from 96 items in Wave 48 (25% decrease)
- PLASTIC - Bags - heavier glossy typically branded carry bags – 21 items, down from 45 items in Wave 48 (53% decrease)
- MISCELLANEOUS - Ice cream sticks – 44 items, down from 67 items in Wave 48 (34% decrease)
- MISCELLANEOUS - Construction materials – 119 items, down from 139 items in Wave 48 (14% decrease)

- METAL - Beer, aluminium, all types, all sizes – 15 items, down from 35 items in Wave 48 (57% decrease)
- MISCELLANEOUS - Tyres & pieces – 15 items, down from 35 items in Wave 48 (57% decrease)

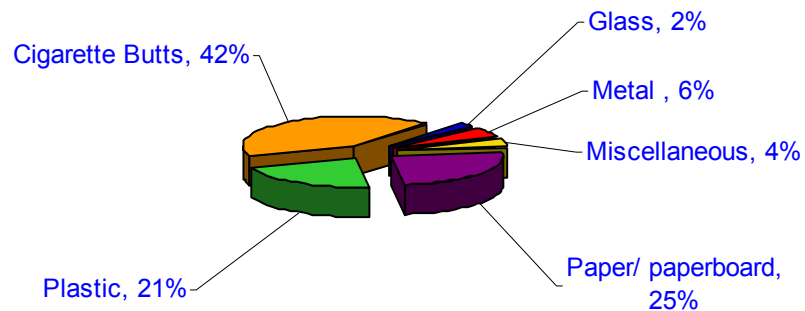
Conversely, there was an increase in several litter items, these included:

- PAPER/PAPERBOARD - Other paper (including tissues) – 2335 items, up from 1958 items in Wave 48 (19% increase)
- CIGARETTE BUTTS - 5927 items, up from 5594 items in Wave 48 (6% increase)
- PLASTIC - Other plastic items - 1108 items, up from 1013 items in Wave 48 (9% increase)
- PLASTIC - Snack bags & confectionery wrappers – 444 items, up from 359 items in Wave 48 (24% increase)
- PAPER/PAPERBOARD - Cups/take away containers – 289 items, up from 208 items in Wave 48 (39% increase)
- METAL - Metal bottle tops and can pull rings – 315 items, up from 255 items (24% increase)
- MISCELLANEOUS - Other miscellaneous – 82 items, up from 26 items (215% increase)
- PLASTIC - Styrene foam boxes, sheets, etc. – 174 items, up from 118 items (47% increase)
- PAPER/PAPERBOARD - Packages & boxes – 242 items, up from 190 items (27% increase)
- PAPER/PAPERBOARD - Shopper docket & related shopping paper (eg. lists) 132 items, up from 81 items (63% increase)
- PLASTIC - Packing tape & straps – 130 items, up from 98 items (33% increase)

Cigarette butts accounted for the largest proportion of all litter items counted (42%, down from 43% in Wave 48 and 46, up from 37% in Wave 47 and 33% in Wave 45). Other material types represented the following proportions of the litter items counted:

- Plastic items (21%, down from 22% in Wave 48)
- Paper/ paperboard (25%, up from 23% in Wave 48)
- Metal items (6%, unchanged from Wave 48)
- Miscellaneous items (4%, down from 5% in Wave 48)
- Glass items (2%, unchanged from Wave 48)

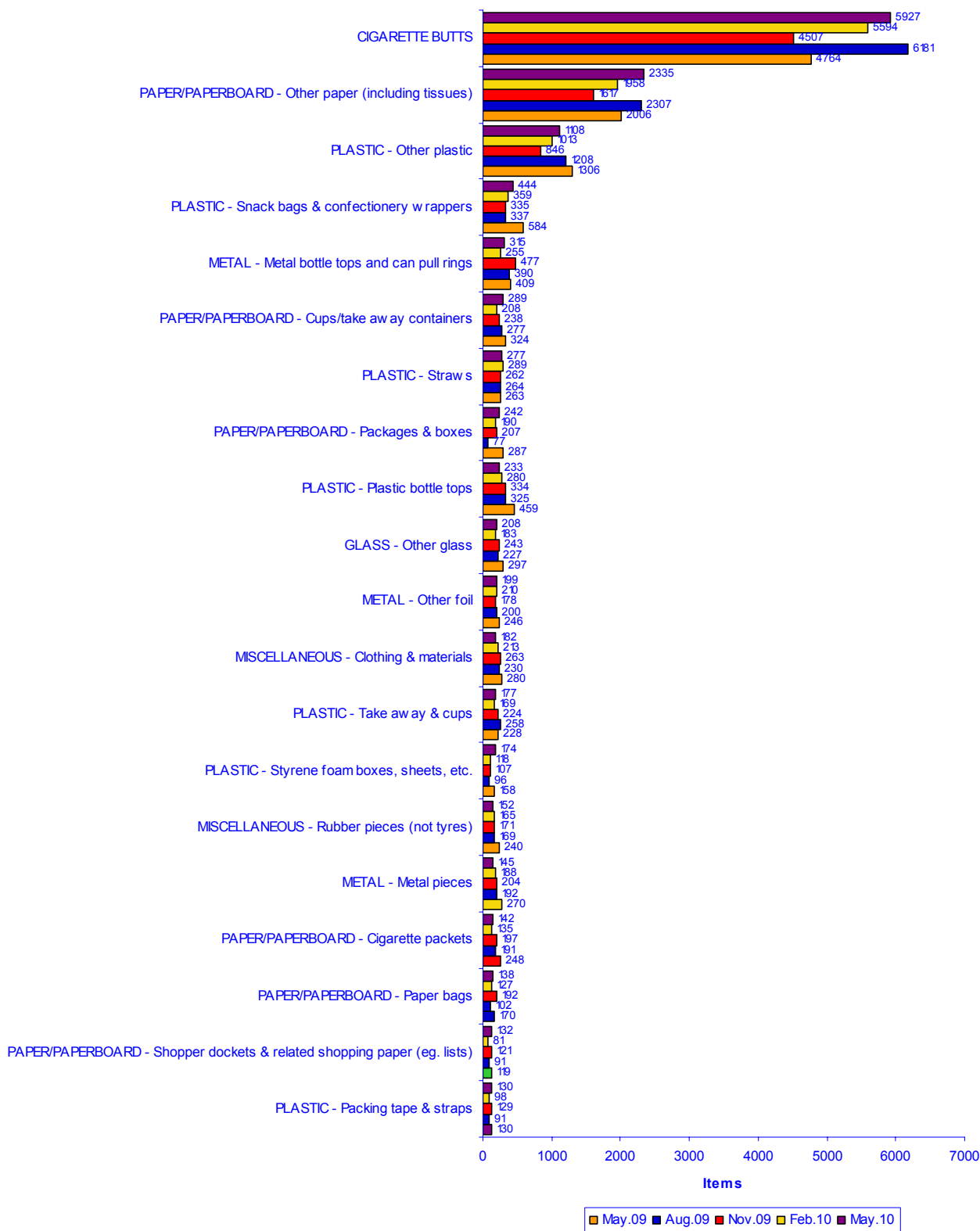
### Items as Proportions of Total by Material Type



The top 20 ranking of litter items for May 2010 also included PAPER/ PAPERBOARD – Shopper dockets & related shopping paper (eg. lists) not present previously in Wave 48.

The item that exited the top 20 as a result of the new entrant was MISCELLANEOUS - Construction materials.

**TOP 20 CATEGORIES - HIGHEST COUNTS**



## Litter Volume

The total volume of litter recorded in May 2010 amounted to 1.761 cubic metres, 40% higher than the estimated litter volume established in the February 2010 Monitor (1.261m<sup>3</sup>). This total litter volume is however, 9% lower than the estimated litter volume established during the volume recorded at the same time in May 2009 (1.925m<sup>3</sup>).

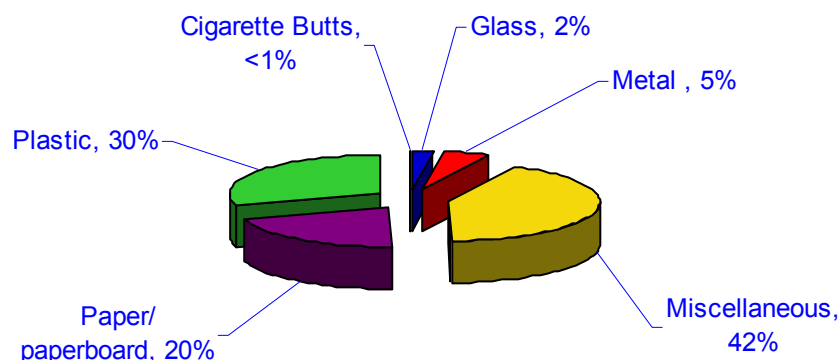
Miscellaneous items contributed the largest proportion of litter volume for Wave 49 (42%, up from 40% in Wave 48). Illegally dumped items formed the majority (93%) of the miscellaneous litter volume and represented the largest increase in the volume of litter (0.696, up from 0.432m<sup>3</sup> in Wave 48).

Plastic litter items (30%, up from 26% in Wave 48) and paper/ paperboard items (20%, down from 24% in Wave 48) accounted for the second and third largest proportions of litter volume in May 2010.

Other material types represented the following proportions of the total volume of litter items counted:

- Metal (5%, down from 6% in Wave 48)
- Glass (2%, down from 4% in Wave 48)
- Cigarette butts (<1%, unchanged from Wave 48)

### Litter Volume as a Proportion of Total Volume

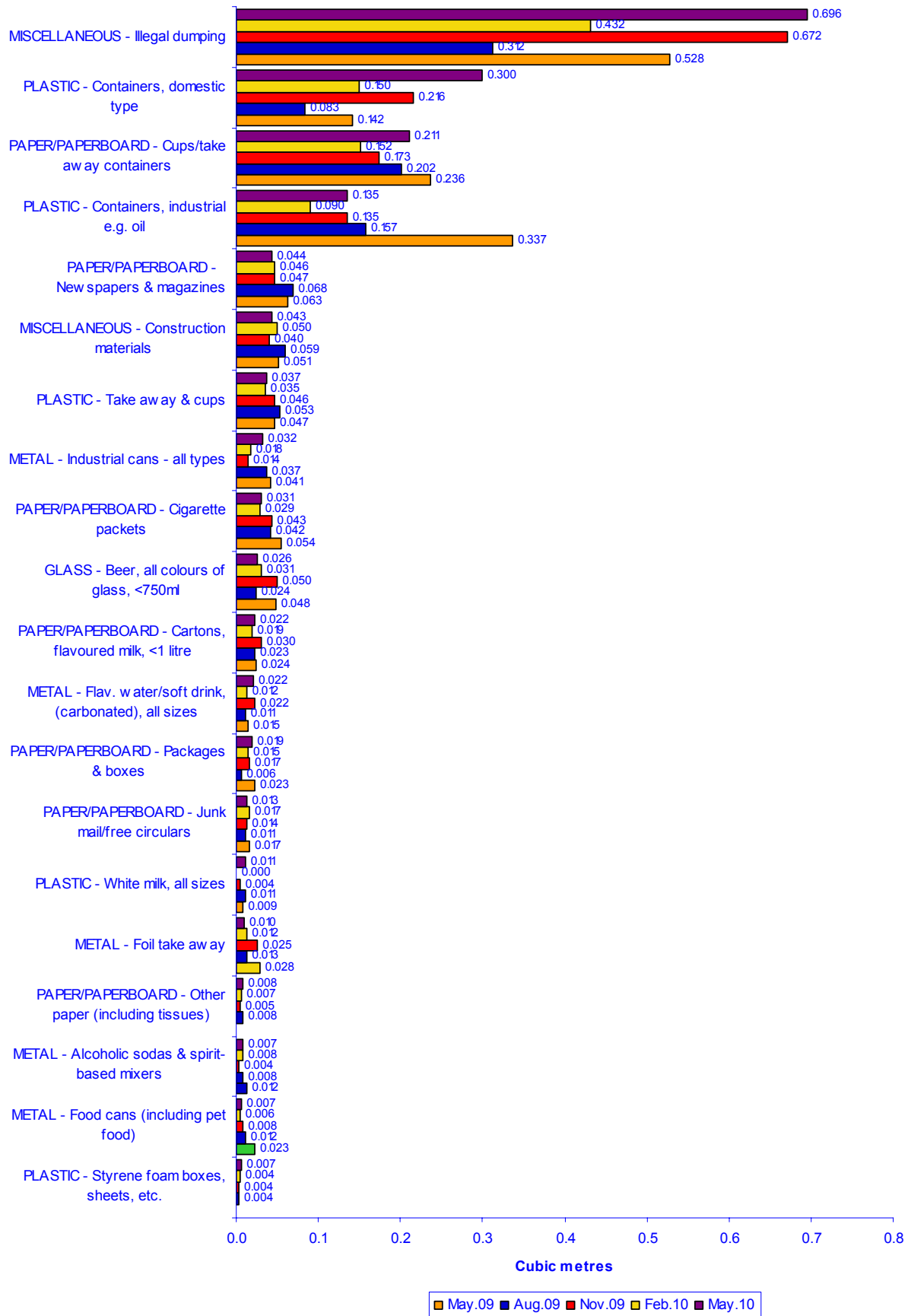


The items associated with the largest estimated litter volumes in Wave 49 included:

- MISCELLANEOUS - Illegal dumping (0.696m<sup>3</sup>, up from 0.432m<sup>3</sup> in Wave 48)
- PLASTIC - Containers, domestic type (0.300m<sup>3</sup>, up from 0.150m<sup>3</sup> in Wave 48)
- PAPER/PAPERBOARD - Cups/take away containers (0.211m<sup>3</sup>, up from 0.152m<sup>3</sup> in Wave 48)
- PLASTIC - Containers, industrial e.g. oil (0.135m<sup>3</sup>, up from 0.090m<sup>3</sup> in Wave 48)
- PAPER/PAPERBOARD - Newspapers & magazines (0.044m<sup>3</sup>, down from 0.046m<sup>3</sup> in Wave 48)
- MISCELLANEOUS - Construction material (0.043m<sup>3</sup>, down from 0.050m<sup>3</sup> in Wave 48)
- PLASTIC - Take away & cups (0.037m<sup>3</sup>, up from 0.035m<sup>3</sup> in Wave 48)
- METAL - Industrial cans – all types (0.032m<sup>3</sup>, up from 0.018m<sup>3</sup> in Wave 48)
- PAPER/PAPERBOARD – Cigarette packets (0.031m<sup>3</sup>, up from 0.029m<sup>3</sup> in Wave 48)
- GLASS - Beer, all colours of glass, <750ml (0.026m<sup>3</sup>, down from 0.031m<sup>3</sup> in Wave 48)

The top 20 ranking of litter items by volume was similar to the results for previous waves, new items entering the top 20 however, were PLASTIC – White milk, all sizes, PAPER/PAPERBOARD – Other paper (including tissues), METAL - Food cans (including pet food) and PLASTIC – Styrene foam boxes, sheets, etc.

With new entrants there are always those items that exit from the top 20 volume list, in Wave 49 they were METAL – Beer, aluminium, all types, all sizes, MISCELLANEOUS – Disposable nappies, PLASTIC – Flavoured water/ soft drink (carbonated (< 1 litre and MISCELLANEOUS - Tyres & pieces.

**TOP 20 CATEGORIES - LARGEST VOLUMES**


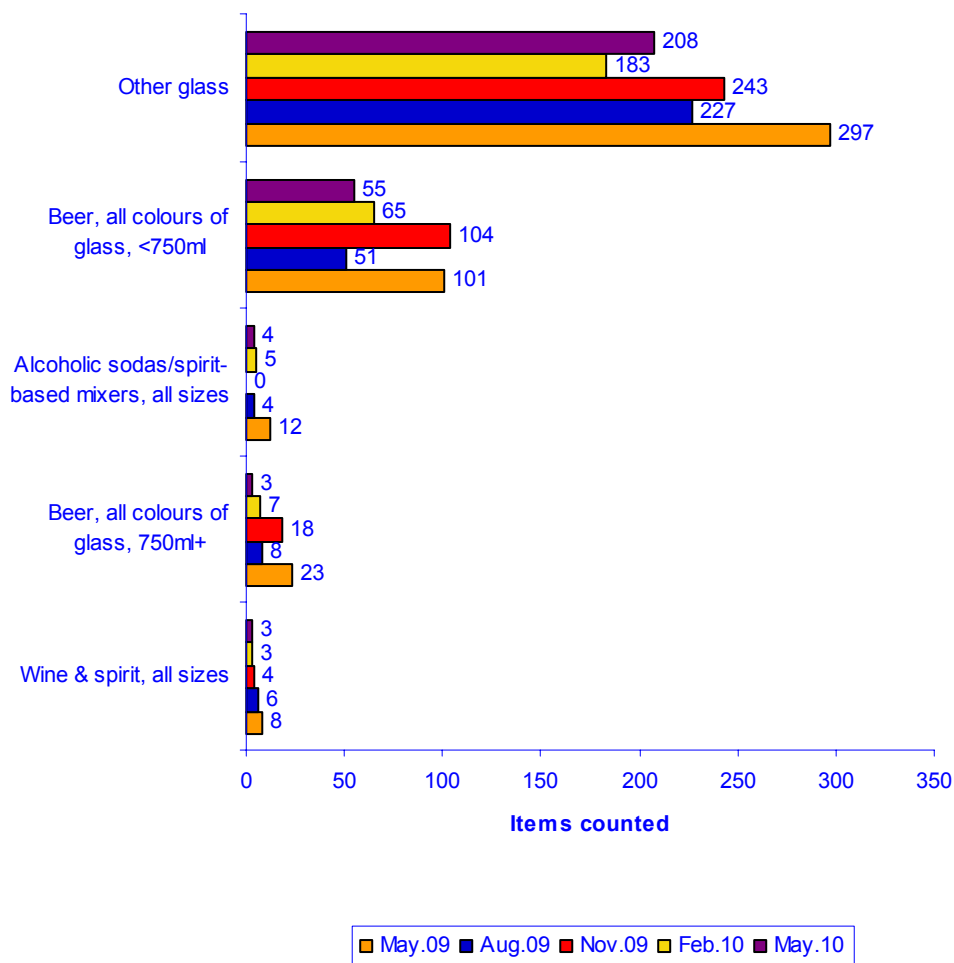
### 3.1 Glass

#### Items

A total of 276 (up from 271 in Wave 48) glass litter items were counted during Wave 49. The most frequently recorded glass items included:

- Other glass (208, up from 183 items in Wave 48)
- Beer, all colours of glass <750ml (55, down from 65 items in Wave 48)
- Alcoholic sodas/spirit-based mixers, all sizes (4 items, down from 5 items in Wave 48)
- Beer, all colours of glass 750ml+ (3, down from 7 items in Wave 48)
- Wine and spirits, all sizes (3 items, unchanged from Wave 48)

**GLASS ITEMS - COUNTS**  
- top 5 -

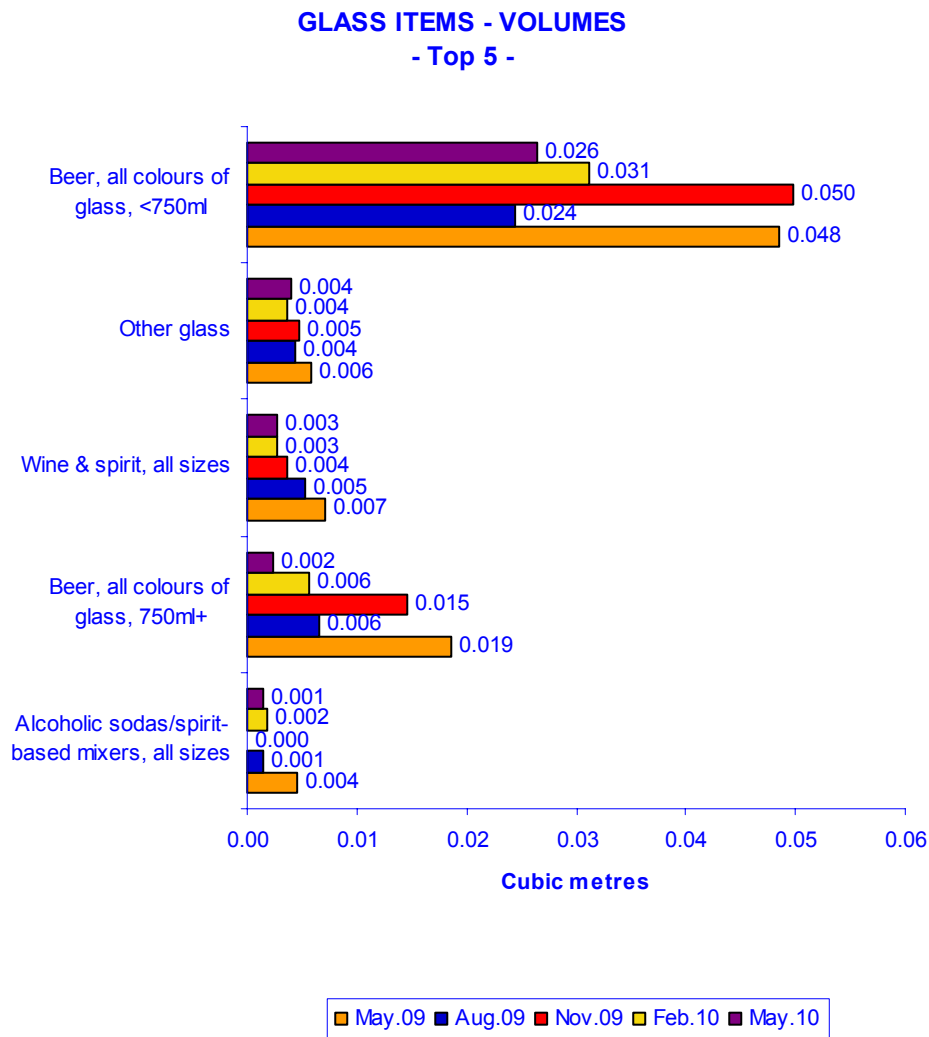


Volume

Glass litter items accounted for 0.038m<sup>3</sup> (down from 0.050m<sup>3</sup> in Wave 48) in estimated litter volume.

Glass items which contributed the largest volumes to the total included:

- Beer, all colours of glass, <750 ml (0.026m<sup>3</sup>, down from 0.031m<sup>3</sup> in Wave 48)
- Other glass (0.004m<sup>3</sup>, unchanged from Wave 48)
- Wine and spirits, all sizes (0.003m<sup>3</sup>, unchanged from Wave 48)
- Beer, all colours of glass, 750+ ml (0.002m<sup>3</sup>, down from 0.006m<sup>3</sup> in Wave 48)
- Alcoholic sodas/spirit-based mixers, all sizes (0.001m<sup>3</sup>, down from the 0.002m<sup>3</sup> in Wave 48)



### 3.2 Metal

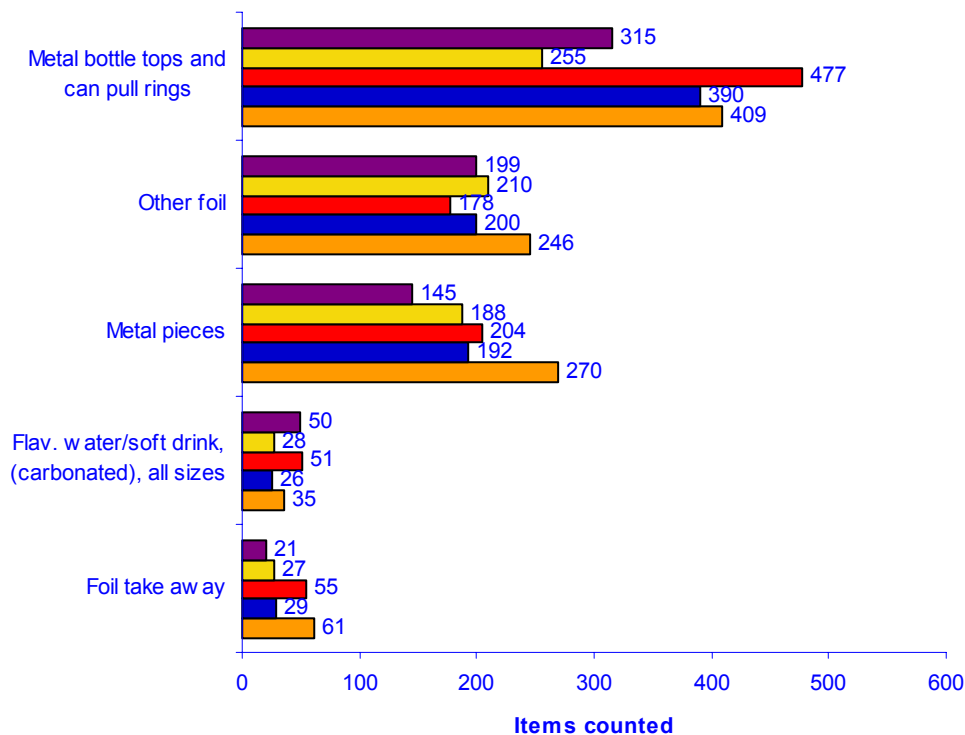
#### Items

A total of 787 (up from 782 in Wave 48) metal litter items were counted during May 2010.

The most frequently counted metal litter items included:

- Metal bottle tops and can pull rings (315 items, up from 255 in Wave 48)
- Other foil (199 items, down from 210 in Wave 48)
- Metal pieces (145 items, down from 188 in Wave 48)
- Flavoured water/soft drink, (carbonated), all sizes (50 items, up from 28 in Wave 48)
- Foil take away (21 items, down from 27 in Wave 48)

**METAL ITEMS - COUNTS - Top 5**



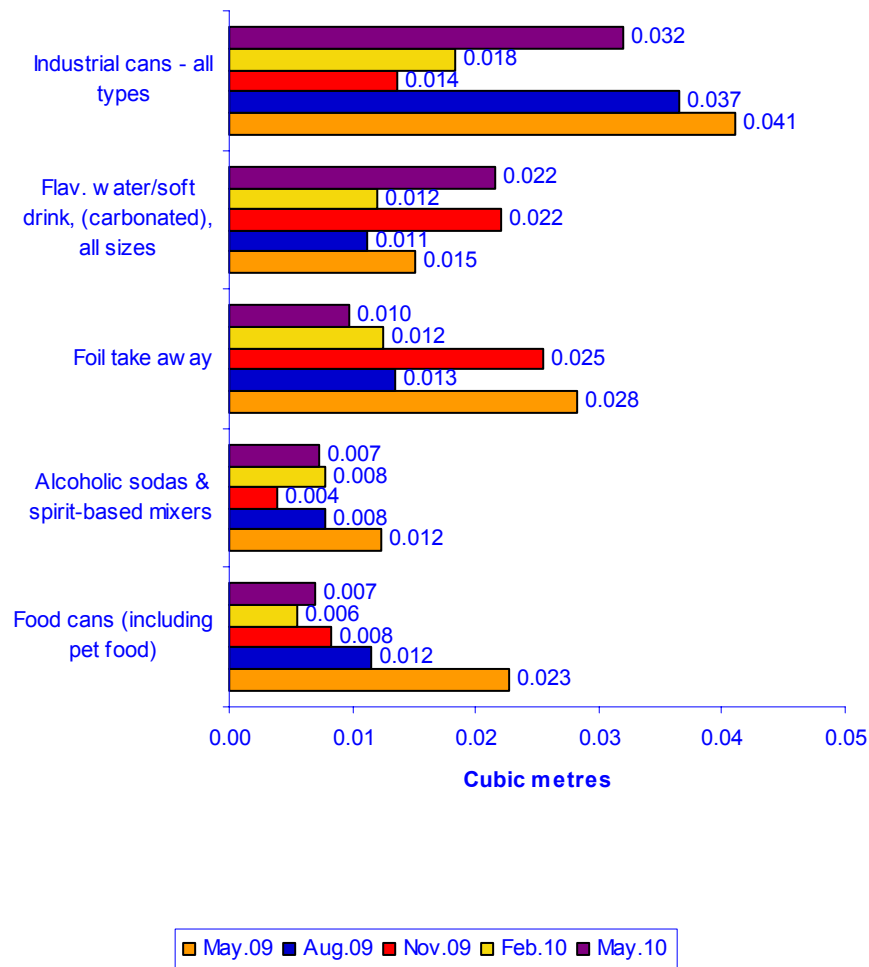
■ May.09 ■ Aug.09 ■ Nov.09 ■ Feb.10 ■ May.10

Volume

Metal litter items accounted for a total estimated litter volume of 0.091m<sup>3</sup> (up from 0.080m<sup>3</sup> in Wave 48). The metal items associated with the largest estimated volumes of litter during Wave 49 included:

- Industrial cans – all types (0.032m<sup>3</sup>, up from 0.018m<sup>3</sup> in Wave 48)
- Flavoured water/ soft drink (carbonated), all sizes (0.022m<sup>3</sup>, up from 0.012m<sup>3</sup> in Wave 48)
- Foil/ take away (0.010m<sup>3</sup>, down from 0.012m<sup>3</sup> in Wave 48)
- Alcoholic sodas & spirit-based mixers (0.007m<sup>3</sup>, down from 0.008m<sup>3</sup> in Wave 48)
- Food cans (including pet food) (0.007m<sup>3</sup>, up from 0.006m<sup>3</sup> in Wave 48)

**METAL ITEMS - VOLUMES - Top 5**



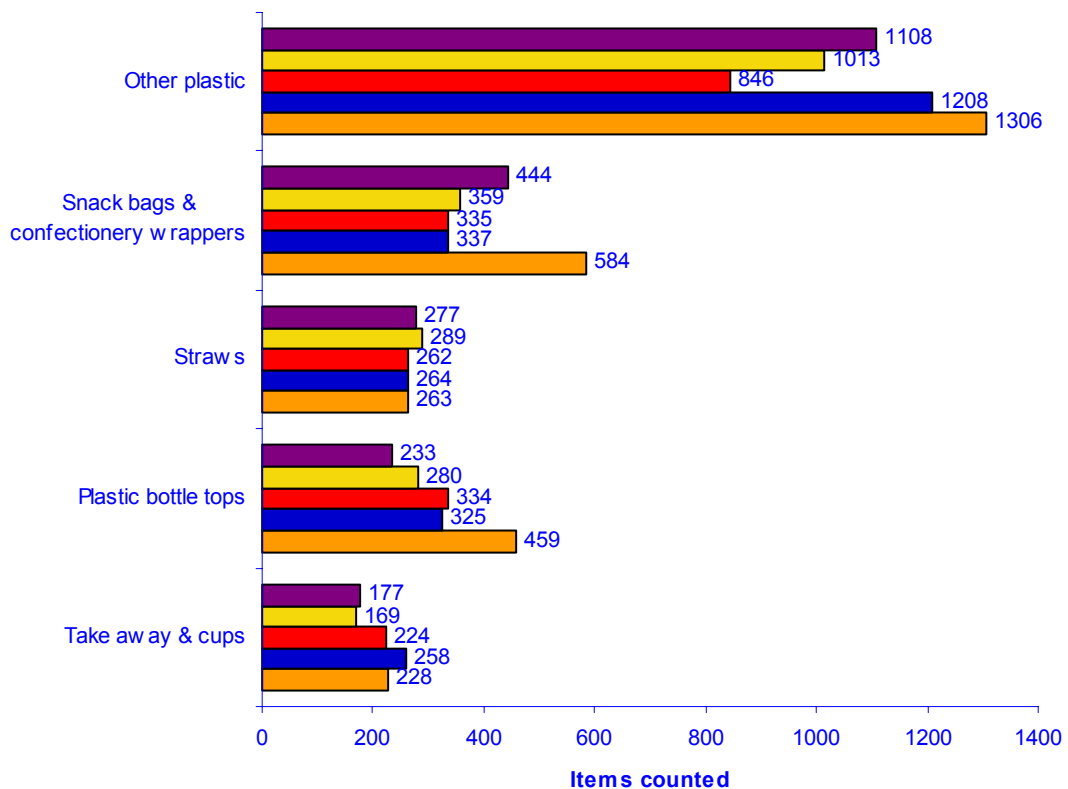
### 3.3 Plastic

#### Items

A total of 3,043 (up from 2,831 in Wave 48) plastic litter items were counted during Wave 49. The most frequently counted plastic litter items included:

- Other plastic (1,108 items, up from 1,013 in Wave 48)
- Snack bags & confectionery wrappers (444 items, up from 359 in Wave 48)
- Straws (277 items, down from 289 in Wave 48)
- Plastic bottle tops (233 items, down from 280 in Wave 48)
- Take away & cups (177 items, up from 169 in Wave 48)

**PLASTIC ITEMS - COUNTS - Top 5**



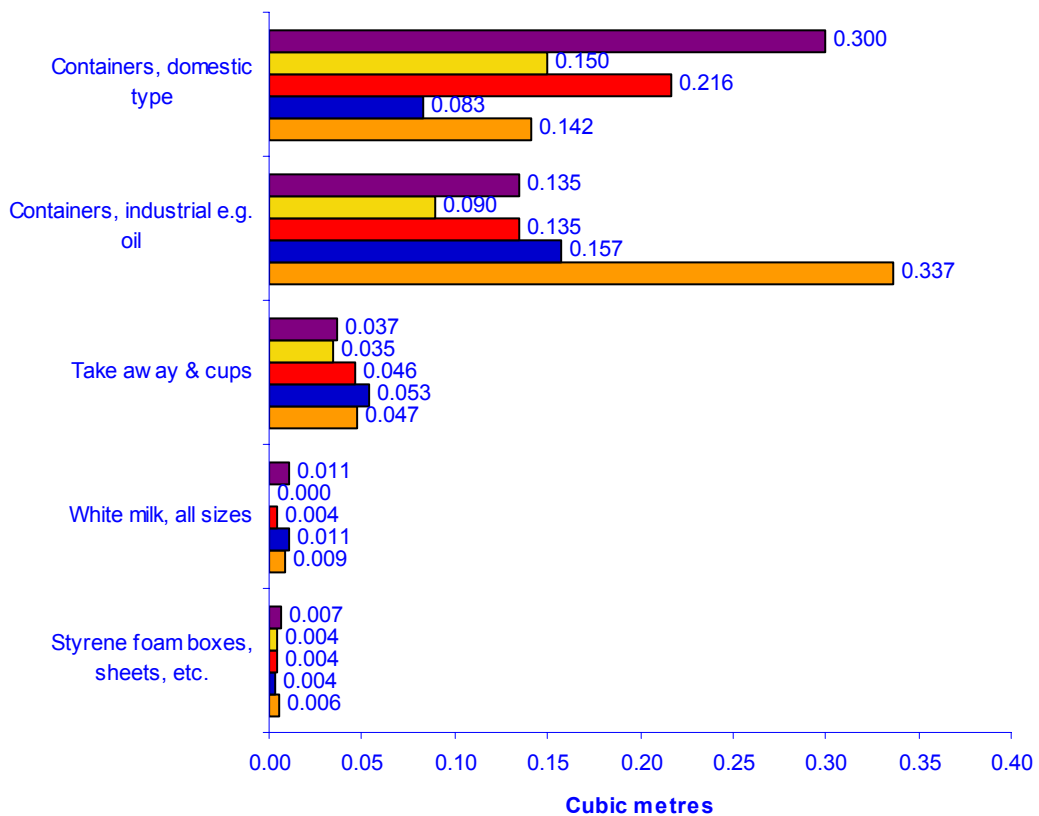
■ May.09 ■ Aug.09 ■ Nov.09 ■ Feb.10 ■ May.10

Volume

Plastic items were associated with an estimated litter volume of 0.527m<sup>3</sup> (up from 0.326m<sup>3</sup> in Wave 48). Items which represented the largest volumes within the Wave 49 litter count included:

- Containers, domestic type (0.300m<sup>3</sup>, up from 0.150m<sup>3</sup> in Wave 48)
- Containers, industrial e.g. oil (0.135m<sup>3</sup>, up from 0.090m<sup>3</sup> in Wave 48)
- Take away & cups (0.037m<sup>3</sup>, up from 0.035m<sup>3</sup> in Wave 48)
- White milk, all sizes (0.011m<sup>3</sup>, up from 0.000m<sup>3</sup> (nil) in Wave 48)
- Styrene foam boxes, sheets, etc. (0.007m<sup>3</sup>, up from 0.004m<sup>3</sup> in Wave 48)

**PLASTIC ITEMS - VOLUMES - Top 5**



■ May.09 ■ Aug.09 ■ Nov.09 ■ Feb.10 ■ May.10

### 3.4 Paper/ Paperboard

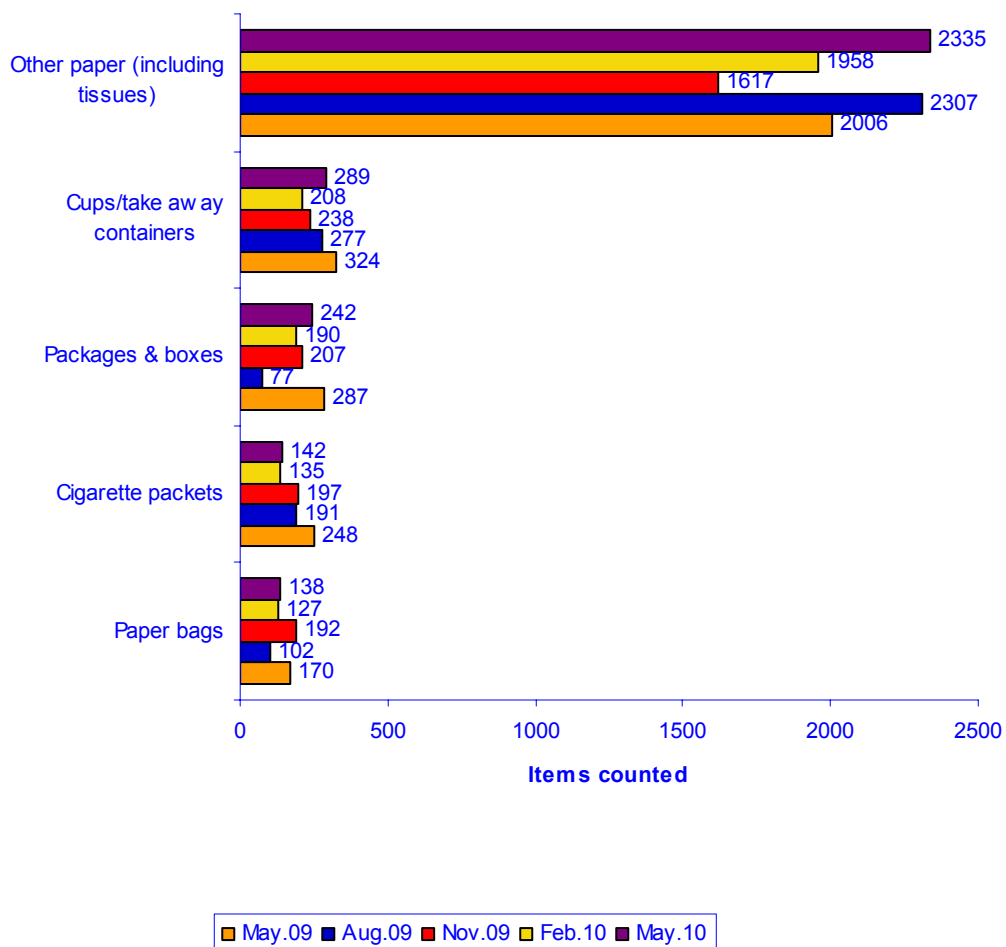
#### Items

A total of 3,501 (up from 2,972 in Wave 48) paper/ paperboard litter items were recorded during Wave 49.

The most frequently identified items within this material type were:

- Other paper – including tissues (2,335 items, up from 1,958 in Wave 48)
- Cups/ take away containers (289 items, up from 208 in Wave 48)
- Packages & boxes (242 items, up from 190 in Wave 48)
- Cigarette packets (142, up from 135 in Wave 48)
- Paper bags (138 items, up from 127 in Wave 48)

**PAPER/ PAPERBOARD ITEMS - COUNTS - Top 5**



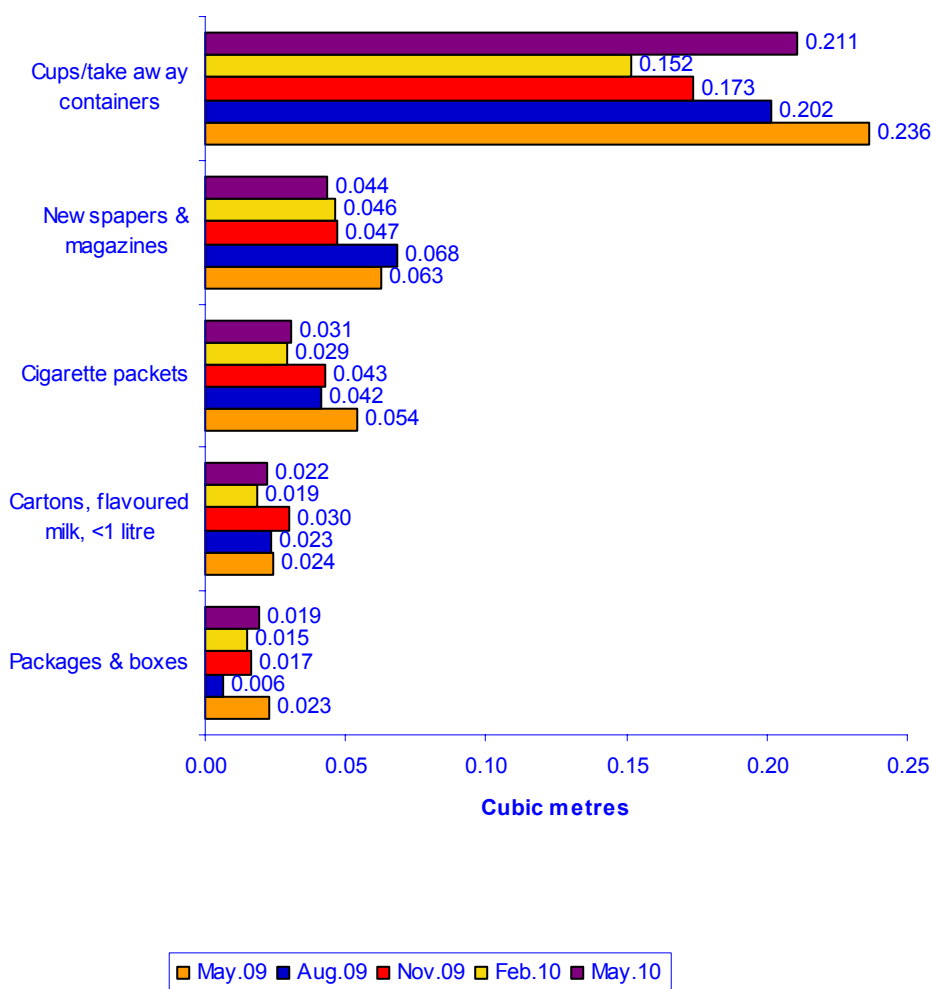
Volume

Paper/ Paperboard items accounted for 0.357m<sup>3</sup> in estimated litter volume (down from 0.299m<sup>3</sup> in Wave 48).

Paper/ paperboard items which contributed the largest volumes to the total included:

- Cups/take away containers (0.211m<sup>3</sup>, up from 0.152m<sup>3</sup> in Wave 48)
- Newspapers & magazines (0.044m<sup>3</sup>, down from 0.046m<sup>3</sup> in Wave 48)
- Cigarette packets (0.031m<sup>3</sup>, up from 0.029m<sup>3</sup> in Wave 48)
- Cartons, flavoured milk, <1 litre (0.022m<sup>3</sup>, up from 0.019m<sup>3</sup> in Wave 48)
- Packages & boxes (0.019m<sup>3</sup>, up from 0.015m<sup>3</sup> in Wave 48)

**PAPER/ PAPERBOARD ITEMS - VOLUMES - Top 5**



### 3.5 *Miscellaneous*

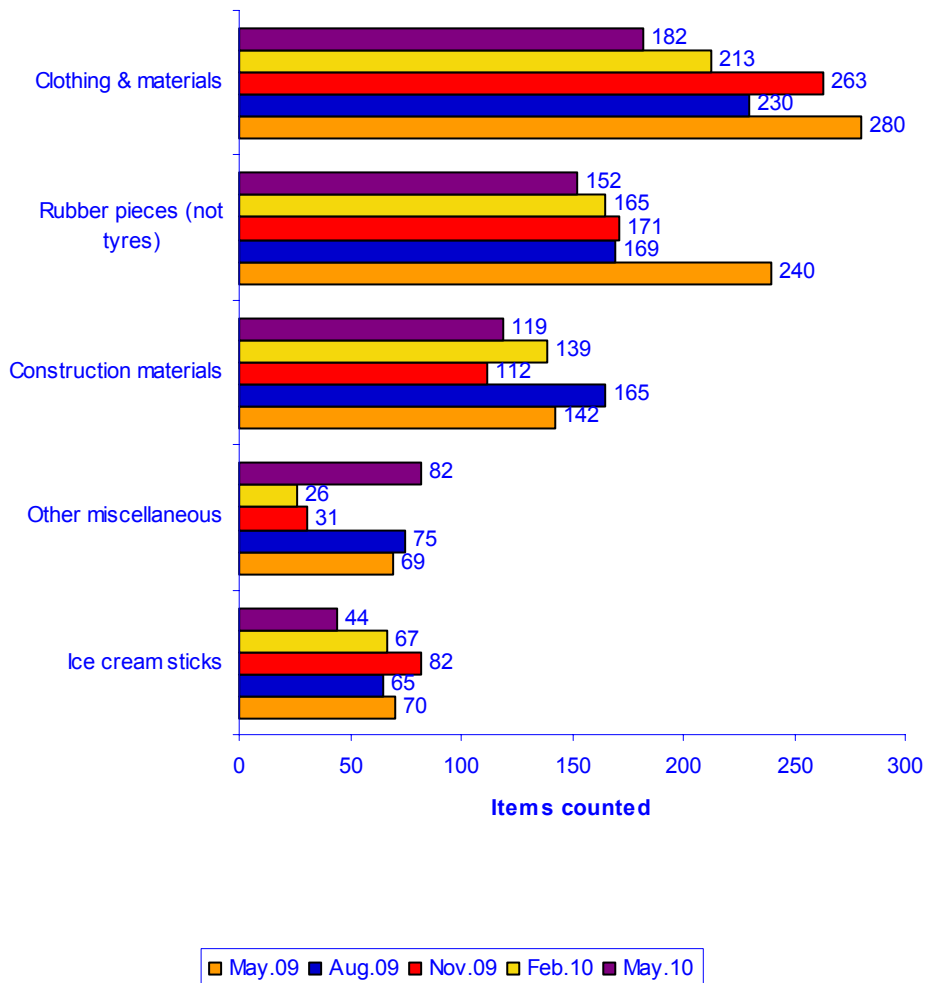
#### Items

A total of 625 (down from 674 in Wave 48) miscellaneous litter items were counted during Wave 49 in May 2010.

The most frequently recorded items included:

- Clothing & materials (182 items, down from 213 in Wave 48)
- Rubber pieces – not tyres (152 items, down from 165 in Wave 48).  
Rubber pieces in this category include vehicle rubber mouldings, hose pipes and tubing, bicycle handle bar grips and casings, pram mouldings and strips.
- Construction materials (119 items, down from 139 in Wave 48)
- Miscellaneous (82 items, up from 26 in Wave 48)
- Ice cream sticks (44 items, down from 67 in Wave 48)

**MISCELLANEOUS ITEMS - COUNTS - Top 5**



Volume

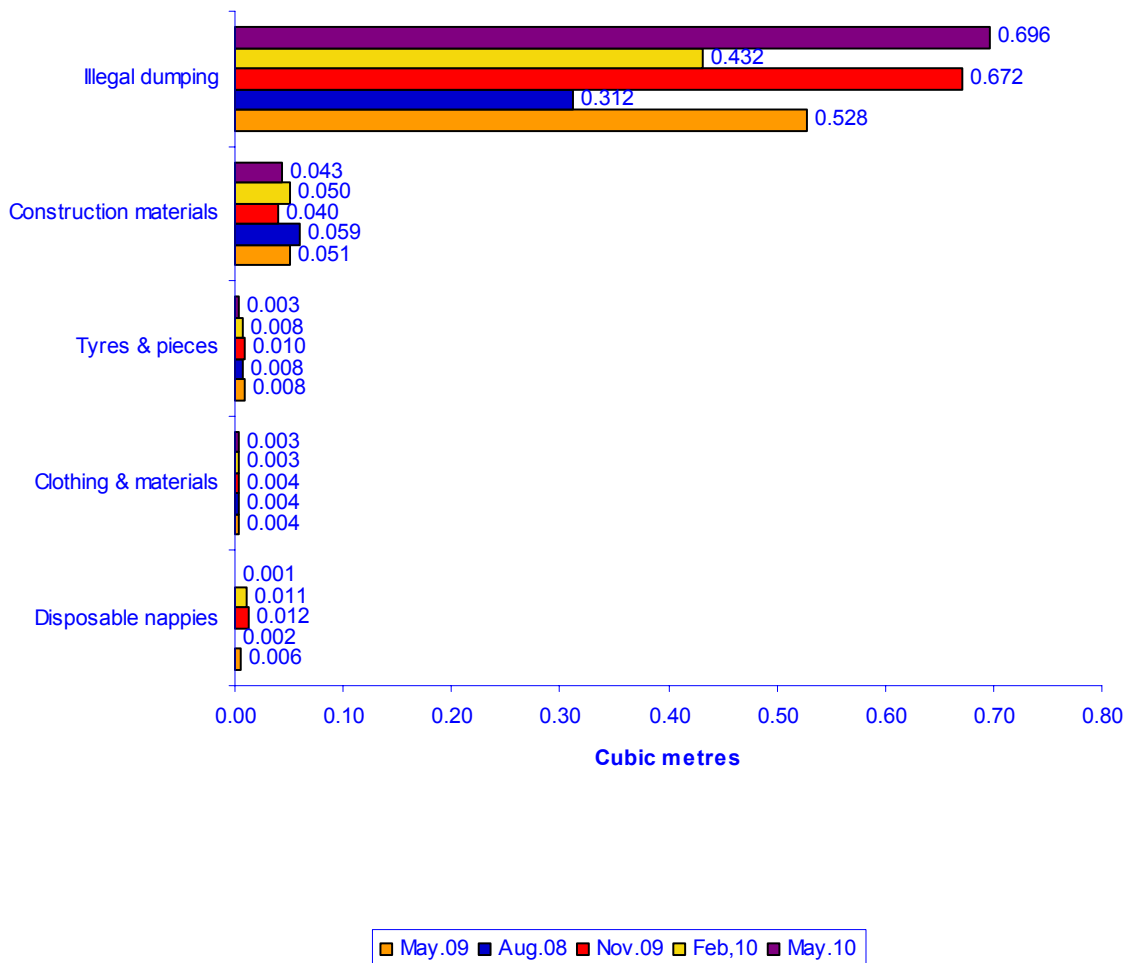
Miscellaneous litter was associated with an estimated litter volume of 0.747m<sup>3</sup> (up from 0.505m<sup>3</sup> in Wave 48).

Illegal dumping remained the major contributor to the total volume of miscellaneous items, with an estimated total volume of 0.696m<sup>3</sup> (up from 0.432m<sup>3</sup> in Wave 48).

Other miscellaneous items which contributed to the litter stream volume included:

- Construction materials (0.043m<sup>3</sup>, down from 0.050m<sup>3</sup> in Wave 48)
- Tyres & pieces (0.003 m<sup>3</sup>, down from 0.008m<sup>3</sup> in Wave 48)
- Clothing and materials (0.003m<sup>3</sup>, unchanged from Wave 48)
- Disposable nappies (0.001 m<sup>3</sup>, down from 0.011 m<sup>3</sup>, in Wave 48)

**MISCELLANEOUS ITEMS - VOLUMES - Top 5**



### 3.6 *Cigarette Butts*

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#### Items

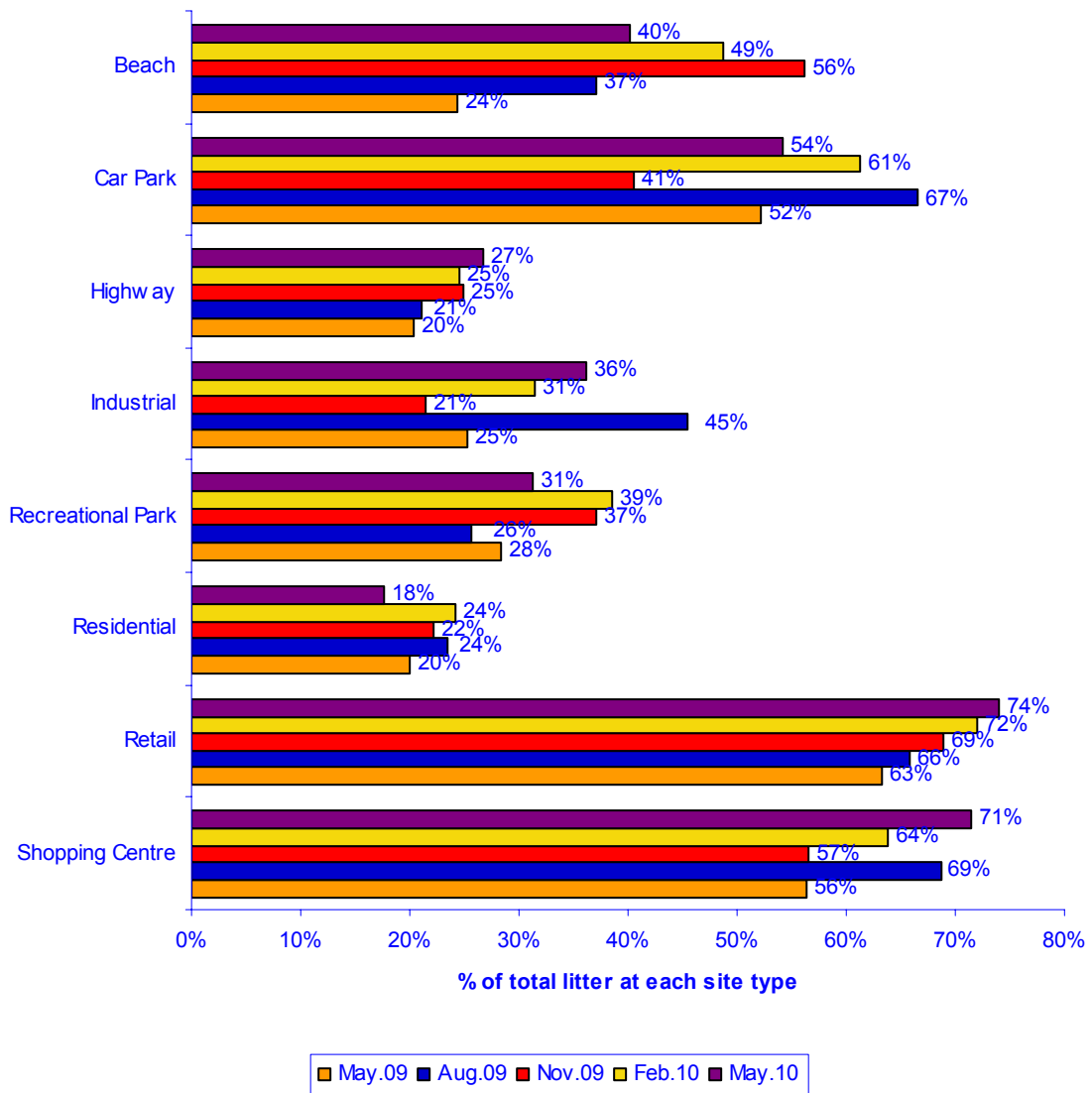
The total number of butts recorded during Wave 49 amounted to 5,927 (up from 5,594 in Wave 48). The number of butts counted in Wave 49 was also up from the number counted in Wave 45 at the same time last year (4,764 butts).

The proportion of cigarette butts of the total litter items counted was highest among retail sites (74%), shopping centres (71%) and at car parks (54%).

The proportion of cigarette butts of the total litter items counted increased at retail sites (74%, up from 72% in Wave 48), shopping centres (71%, up from 64% in Wave 48), industrial sites (36%, up from 31% in Wave 48) and highway sites (27%, up from 25% in Wave 48).

There was a decrease, however, in the proportion of cigarette butts of the total litter items counted at car parks (54%, down from 61% in Wave 48), beaches (40%, down from 49% in Wave 40), recreational parks (31%, down from 39% in Wave 48), and residential sites (18%, down from 24% in Wave 48).

**CIGARETTE BUTT COUNTS AS PROPORTIONS OF TOTAL LITTER COUNT AT EACH SITE TYPE**



**Volume**

Despite cigarette butts being the most numerous litter item, they accounted for less than 1% of the total volume of litter recorded during the current Wave.

### 3.7 Dispersion of Litter by Site Type

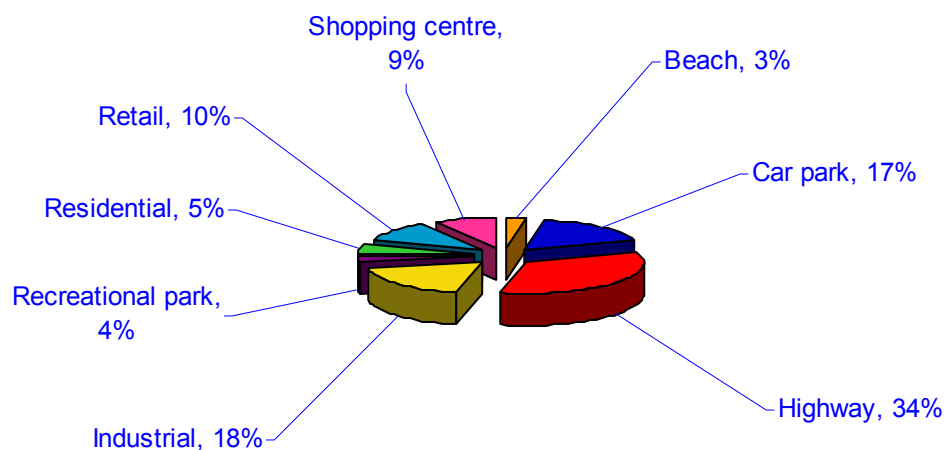
#### Items

Highways remained the most significant contributor to the total number of items counted during Wave 49 with more than one third (34%, unchanged from Wave 48) of the total litter items counted at highway locations.

Other sites contributed the following proportions of the total number of litter items counted during May 2010:

- Industrial (18%, up from 13% in Wave 48)
- Car Park (17%, down from 18% in Wave 48)
- Retail (10%, down from 13% in Wave 48)
- Shopping Centre (9%, up from 7% in Wave 48)
- Residential (5%, down from 6% in Wave 48)
- Recreational Park (4%, down from 5% in Wave 48)
- Beach (3%, down from 4% in Wave 48)

#### PROPORTION OF TOTAL LITTER ITEMS COUNTED WITHIN SITE TYPE

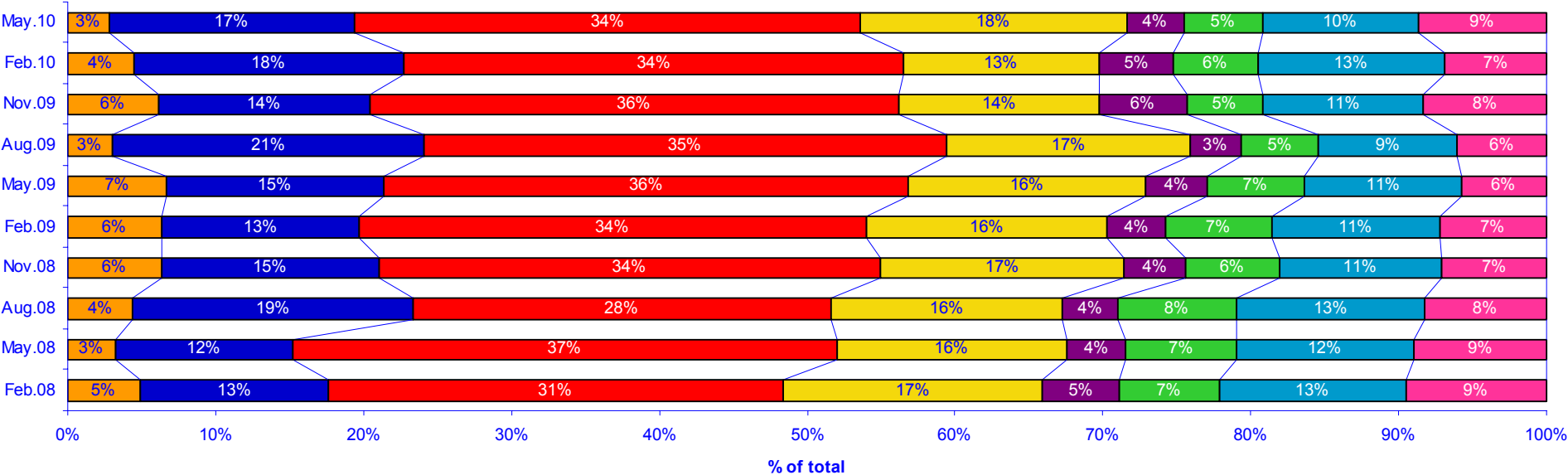


A comparison of the proportions of litter items found at each site type revealed that highway locations contributed large amounts to the total number of litter items counted in the May 2010 Monitor. Although highway sites represented only 18% of the total number of sites surveyed, the sites contributed more than one third (34%, unchanged from Wave 48) of the total litter items counted during Wave 49.

Conversely, residential locations, beaches, and recreational parks contributed smaller proportions of litter items to the total litter count than anticipated based upon the proportion of these sites within the overall sample of locations as outlined below:

- Residential areas - incorporated 17% of the sites surveyed, but contributed only 5% (down from 6% in Wave 48) of the total litter items counted in Wave 49
- Beaches – represented 11% of the sites surveyed, but contributed 3% (down from 4% in Wave 48) of the total litter counted in Wave 49
- Recreational parks – represented 9% of sites surveyed, but contributed 4% (down from 5% in Wave 48) of the total litter counted in Wave 49

**PROPORTION OF TOTAL LITTER ITEMS COUNTED WITHIN SITE TYPE**  
 - tracking -



■ Beach 
 ■ Car Park 
 ■ Highway 
 ■ Industrial 
 ■ Recreational Park 
 ■ Residential 
 ■ Retail 
 ■ Shopping Centre

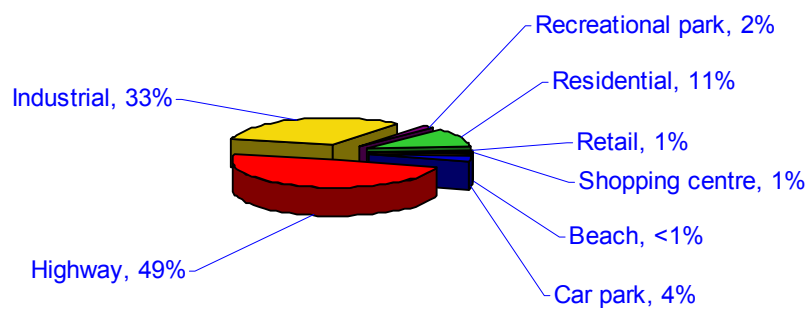
Volume

Almost half (49%, up from 48% in Wave 48) of the total volume of litter estimated during Wave 49 was associated with litter items at highway locations.

Industrial sites (33%, up from 31% in Wave 48) also contributed one third of the total litter volume, while residential sites (11%, up from 7% in Wave 48) and car park sites (4%, down from 6% in Wave 48) added moderate volumes of litter to the overall litter volume.

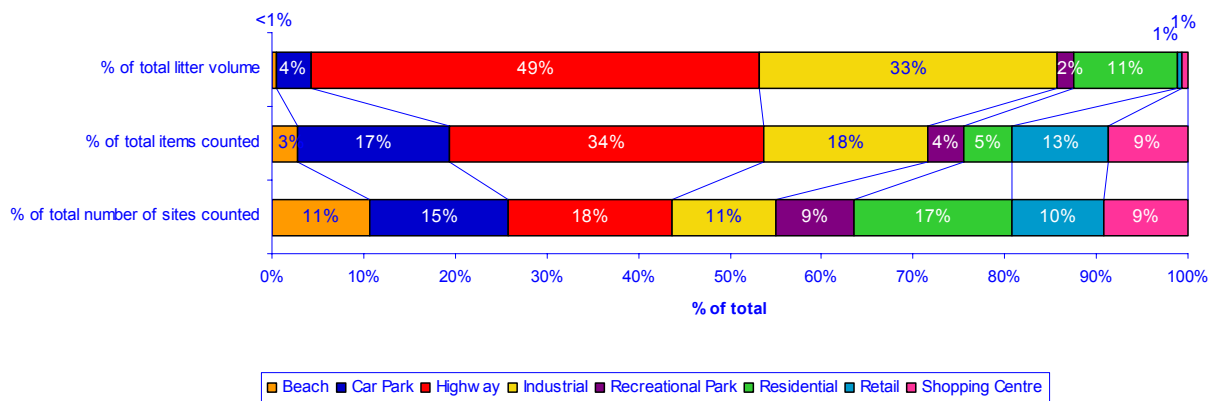
Lower volumes of litter were estimated at recreational parks (2%, down from 5% in Wave 48), shopping centres (1%, unchanged from Wave 48), retail sites (1%, unchanged from Wave 48) and beaches (<1%, down marginally from 1% in Wave 48) to the total volume of litter recorded during May 2010.

**PROPORTION OF TOTAL LITTER VOLUME BY SITE TYPE**



A comparison of the litter volume, number of litter items and proportion of sites represented within location types shows that highways and industrial locations contributed a larger number and volume of litter items than would be expected given their representations within the sample.

**NUMBER AND VOLUME OF LITTER BY SITE TYPE AS PROPORTIONS OF TOTALS**



### **3.8** *CDL Beverage Containers*

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The overwhelming majority (98%, unchanged from 98% in Wave 48) of litter items counted in May 2010 were non-beverage items.

The total number of CDL beverage containers counted decreased by 17% to 201 (down from 241 in Wave 48).

CDL beverage containers accounted for 92% (down from 98% in Wave 48) of all beverage containers counted during Wave 49.

## *Data Summary - Items*

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Items									TOTAL ITEMS	
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN		REGIONAL
<b>CIGARETTE BUTTS</b>		NBEV	162	1268	1296	924	171	133	1099	874	4423	1504	5927
<b>GLASS</b>	Alcoholic sodas/spirit-based mixers, all sizes	CDL			4							4	4
	Beer, all colours of glass, <750ml	CDL		1	13	31		7	3		46	9	55
	Beer, all colours of glass, 750ml+	CDL			3							3	3
	Cider/fruit based etc.	CDL			1							1	1
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL											0
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL											0
	Flav. water/soft drink (carbonated), <1 litre	CDL											0
	Flav. water/soft drink (carbonated), 1 litre+	CDL											0
	Fruit juice, <1 litre	CDL											0
	Fruit juice, 1 litre+	BEV											0
	Other glass	NBEV	3	15	88	74		21	4	3	174	34	208
	Plain water (carbonated or non-carb), <1 litre	CDL											0
	Plain water (carbonated or non-carb), 1 litre+	CDL											0
	Wine & spirit, all sizes	BEV			3						2	1	3
Wine cooler, all sizes	CDL			2							2	2	
<b>TOTAL</b>			<b>3</b>	<b>16</b>	<b>114</b>	<b>105</b>	<b>0</b>	<b>28</b>	<b>7</b>	<b>3</b>	<b>222</b>	<b>54</b>	<b>276</b>
<b>METAL</b>	Aerosols - pressure packs	NBEV	1		2			1			2	2	4
	Alcoholic sodas & spirit-based mixers	CDL			11	2					7	6	13
	Beer, aluminium, all types, all sizes	CDL			12	3					8	7	15
	Cider/fruit based etc.	CDL				2					2		2
	Flav. water/soft drink, (carbonated), all sizes	CDL	1		44	3		2			45	5	50
	Flav. water/soft drink, (non-carb), all sizes	CDL			1							1	1
	Foil take away	NBEV	1	2	9	1	1	5		2	11	10	21
	Food cans (including pet food)	NBEV			3	10		2			12	3	15
	Industrial cans - all types	NBEV			4	3					1	6	7
	Metal bottle tops and can pull rings	NBEV	4	42	106	84	19	26	14	20	247	68	315
	Metal pieces	NBEV	2	9	67	51		10	3	3	105	40	145
Other foil	NBEV	5	40	70	24	11	12	22	15	141	58	199	
<b>TOTAL</b>			<b>14</b>	<b>93</b>	<b>329</b>	<b>183</b>	<b>31</b>	<b>58</b>	<b>39</b>	<b>40</b>	<b>581</b>	<b>206</b>	<b>787</b>

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Items											
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN	REGIONAL	TOTAL ITEMS	
MISCELLANEOUS	Clothing & materials	NBEV	9	31	98	19	5	15	2	3	146	36	182	
	Condoms	NBEV							1		1		1	
	Construction materials	NBEV	3	10	49	39	1	16	1		108	11	119	
	Disposable nappies	NBEV			1							1	1	
	Ice cream sticks	NBEV	4	15	7	6	1	3	5	3	34	10	44	
	Illegal dumping	NBEV		1	9	13	1	5			28	1	29	
	Other miscellaneous	NBEV	2	10	47	5		9	6	3	49	33	82	
	Rubber pieces (not tyres)	NBEV	4	18	83	30	2	11	1	3	119	33	152	
	Syringes	NBEV												0
	Tyres & pieces	NBEV		1	14						6	9	15	
<b>TOTAL</b>		<b>22</b>	<b>86</b>	<b>308</b>	<b>112</b>	<b>10</b>	<b>59</b>	<b>16</b>	<b>12</b>	<b>491</b>	<b>134</b>	<b>625</b>		
PAPER/PAPERBOARD	Cartons, flavoured milk, <1 litre	CDL			27	2					20	9	29	
	Cartons, flavoured milk, 1 litre+	BEV			1	1					1	1	2	
	Cartons, fruit juice, <1 litre	CDL											0	
	Cartons, fruit juice, 1 litre+	BEV											0	
	Cartons, milk, plain (white), all sizes	BEV			3	1					3	1	4	
	Cigarette packets	NBEV		19	75	31		9	1	7	115	27	142	
	Cups/take away containers	NBEV	2	22	183	62	4	10	1	5	272	17	289	
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL						1			1		1	
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL			1						1		1	
	Ice cream wrappers	NBEV	5	3	15	6				2	10	21	31	
	Junk mail/free circulars	NBEV		9	23	13		18	6	3	52	20	72	
	Newspapers & magazines	NBEV		4	21	5		6	1		25	12	37	
	Other paper (including tissues)	NBEV	71	316	942	428	115	188	155	120	1979	356	2335	
	Packages & boxes	NBEV		8	152	58	1	10	12	1	221	21	242	
	Paper bags	NBEV	1	15	74	27	7	2	6	6	120	18	138	
Shopper docketts & related shopping paper (eg. lists)	NBEV		53	12	11	2	6	19	29	101	31	132		
Tickets, e.g. bus, ATM, vending machine etc.	NBEV		9	10	9		2	7	9	34	12	46		
<b>TOTAL</b>		<b>79</b>	<b>458</b>	<b>1539</b>	<b>654</b>	<b>129</b>	<b>252</b>	<b>208</b>	<b>182</b>	<b>2955</b>	<b>546</b>	<b>3501</b>		

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Items											
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN	REGIONAL	TOTAL ITEMS	
PLASTIC	6 ring can holders	NBEV		4	2						4	2	6	
	Bags - heavier glossy typically branded carry bags	NBEV	1		20						15	6	21	
	Bags - supermarket type light weight carry bags	NBEV	3	7	75	5		4		3	68	29	97	
	Bread bag tags	NBEV	2	5	5	4	23	2			18	23	41	
	Containers, domestic type	NBEV			16	15		5			31	5	36	
	Containers, industrial e.g. oil	NBEV			6						3	3	6	
	Drink pouches	CDL												0
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL	1		5			1			6	1	7	
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL			1			1			1	1	2	
	Flav. water/soft drink (carbonated), <1 litre	CDL			7						6	1	7	
	Flav. water/soft drink (carbonated), 1 litre+	CDL			3						3		3	
	Flavoured milk, <1 litre	CDL			1							1		1
	Flavoured milk, 1 litre+	BEV	1								1		1	
	Fruit juice, <1 litre	CDL			1						1		1	
	Fruit juice, 1 litre+	BEV		1							1		1	
	Lollipop sticks	NBEV	3	25	14	9	30	10	6	14	91	20	111	
	Other plastic	NBEV	50	107	456	244	51	117	52	31	894	214	1108	
	Packing tape & straps	NBEV		3	74	42	3	4	4		112	18	130	
	Plain water (carbonated or non-carb), <1 litre	CDL		1		1				1	3		3	
	Plain water (carbonated or non-carb), 1 litre+	CDL												0
	Plastic bottle tops	NBEV	12	32	82	56	10	24	10	7	189	44	233	
	Sacks - sheeting - other bags	NBEV		8	46	36		1	3		88	6	94	
	Snack bags & confectionery wrappers	NBEV	20	147	114	50	50	33	16	14	360	84	444	
	Spoons/cutlery	NBEV	6	5	18	6	11	2	3	4	32	23	55	
	Straws	NBEV	20	55	101	20	19	16	14	32	200	77	277	
	Styrene foam boxes, sheets, etc.	NBEV	1	3	101	63	2	2	1	1	156	18	174	
	Take away & cups	NBEV	3	14	115	20	7	4	8	6	132	45	177	
White milk, all sizes	BEV			4	1					2	3	5		
Wine cask bladders	BEV			2							2		2	
<b>TOTAL</b>		<b>123</b>	<b>417</b>	<b>1269</b>	<b>572</b>	<b>206</b>	<b>226</b>	<b>117</b>	<b>113</b>	<b>2417</b>	<b>626</b>	<b>3043</b>		
<b>GRAND TOTAL</b>		<b>403</b>	<b>2338</b>	<b>4855</b>	<b>2550</b>	<b>547</b>	<b>756</b>	<b>1486</b>	<b>1224</b>	<b>11089</b>	<b>3070</b>	<b>14159</b>		

## *Data Summary - Volumes*

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Volume - Cubic Metres										
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN	REGIONAL	TOTAL VOLUME
<b>CIGARETTE BUTTS</b>		NBEV	0.000019	0.000146	0.000149	0.000106	0.000020	0.000015	0.000126	0.000101	0.000509	0.000173	0.000682
<b>GLASS</b>	Alcoholic sodas/spirit-based mixers, all sizes	CDL			0.001497							0.001497	0.001497
	Beer, all colours of glass, <750ml	CDL		0.000480	0.006234	0.014865		0.003357	0.001439		0.022057	0.004316	0.026373
	Beer, all colours of glass, 750ml+	CDL			0.002431							0.002431	0.002431
	Cider/fruit based etc.	CDL			0.000454							0.000454	0.000454
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL											0.000000
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL											0.000000
	Flav. water/soft drink (carbonated), <1 litre	CDL											0.000000
	Flav. water/soft drink (carbonated), 1 litre+	CDL											0.000000
	Fruit juice, <1 litre	CDL											0.000000
	Fruit juice, 1 litre+	BEV											0.000000
	Other glass	NBEV	0.000059	0.000295	0.001728	0.001453		0.000412	0.000079	0.000059	0.003417	0.000668	0.004085
	Plain water (carbonated or non-carb), <1 litre	CDL											0.000000
	Plain water (carbonated or non-carb), 1 litre+	CDL											0.000000
	Wine & spirit, all sizes	BEV			0.002674						0.001783	0.000891	0.002674
Wine cooler, all sizes	CDL			0.000749							0.000749	0.000749	
<b>TOTAL</b>		<b>0.000059</b>	<b>0.000774</b>	<b>0.015767</b>	<b>0.016318</b>	<b>0.000000</b>	<b>0.003769</b>	<b>0.001517</b>	<b>0.000059</b>	<b>0.027257</b>	<b>0.011006</b>	<b>0.038263</b>	
<b>METAL</b>	Aerosols - pressure packs	NBEV	0.000684		0.001368			0.000684			0.001368	0.001368	0.002737
	Alcoholic sodas & spirit-based mixers	CDL			0.006181	0.001124					0.003933	0.003371	0.007305
	Beer, aluminium, all types, all sizes	CDL			0.005177	0.001294					0.003451	0.003020	0.006471
	Cider/fruit based etc.	CDL				0.000863					0.000863		0.000863
	Flav. water/soft drink, (carbonated), all sizes	CDL	0.000431		0.018982	0.001294		0.000863			0.019413	0.002157	0.021570
	Flav. water/soft drink, (non-carb), all sizes	CDL			0.000382							0.000382	0.000382
	Foil take away	NBEV	0.000462	0.000925	0.004161	0.000462	0.000462	0.002312		0.000925	0.005086	0.004624	0.009710
	Food cans (including pet food)	NBEV			0.001391	0.004638		0.000928			0.005566	0.001391	0.006957
	Industrial cans - all types	NBEV			0.018280	0.013710					0.004570	0.027420	0.031990
	Metal bottle tops and can pull rings	NBEV	0.000016	0.000168	0.000424	0.000336	0.000076	0.000104	0.000056	0.000080	0.000988	0.000272	0.001260
	Metal pieces	NBEV	0.000021	0.000095	0.000710	0.000541		0.000106	0.000032	0.000032	0.001113	0.000424	0.001537
	Other foil	NBEV	0.000008	0.000062	0.000109	0.000037	0.000017	0.000019	0.000034	0.000023	0.000220	0.000090	0.000310
<b>TOTAL</b>		<b>0.001623</b>	<b>0.001251</b>	<b>0.057166</b>	<b>0.024300</b>	<b>0.000556</b>	<b>0.005015</b>	<b>0.000122</b>	<b>0.001060</b>	<b>0.046572</b>	<b>0.044520</b>	<b>0.091092</b>	

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Volume - Cubic Metres										
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN	REGIONAL	TOTAL VOLUME
MISCELLANEOUS	Clothing & materials	NBEV	0.000138	0.000474	0.001499	0.000291	0.000077	0.000230	0.000031	0.000046	0.002234	0.000551	0.002785
	Condoms	NBEV						0.000000			0.000000		0.000000
	Construction materials	NBEV	0.001080	0.003600	0.017640	0.014040	0.000360	0.005760	0.000360		0.038880	0.003960	0.042840
	Disposable nappies	NBEV			0.001125							0.001125	0.001125
	Ice cream sticks	NBEV	0.000004	0.000014	0.000006	0.000006	0.000001	0.000003	0.000005	0.000003	0.000031	0.000009	0.000040
	Illegal dumping	NBEV		0.024000	0.216000	0.312000	0.024000	0.120000			0.672000	0.024000	0.696000
	Other miscellaneous	NBEV	0.000027	0.000135	0.000635	0.000068		0.000122	0.000081	0.000041	0.000662	0.000446	0.001107
	Rubber pieces (not tyres)	NBEV	0.000001	0.000003	0.000014	0.000005	0.000000	0.000002	0.000000	0.000000	0.000020	0.000005	0.000025
	Syringes	NBEV											0.000000
	Tyres & pieces	NBEV		0.000225	0.003150						0.001350	0.002025	0.003375
<b>TOTAL</b>			<b>0.001249</b>	<b>0.028451</b>	<b>0.240069</b>	<b>0.326409</b>	<b>0.024438</b>	<b>0.126116</b>	<b>0.000477</b>	<b>0.000090</b>	<b>0.715176</b>	<b>0.032121</b>	<b>0.747297</b>
PAPER/PAPERBOARD	Cartons, flavoured milk, <1 litre	CDL			0.020242	0.001499					0.014994	0.006747	0.021741
	Cartons, flavoured milk, 1 litre+	BEV			0.001013	0.001013					0.001013	0.001013	0.002025
	Cartons, fruit juice, <1 litre	CDL											0.000000
	Cartons, fruit juice, 1 litre+	BEV											0.000000
	Cartons, milk, plain (white), all sizes	BEV			0.003038	0.001013					0.003038	0.001013	0.004051
	Cigarette packets	NBEV		0.004140	0.016340	0.006754		0.001961	0.000218	0.001525	0.025055	0.005882	0.030938
	Cups/take away containers	NBEV	0.001458	0.016037	0.133398	0.045195	0.002916	0.007290	0.000729	0.003645	0.198274	0.012392	0.210667
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL						0.000262			0.000262		0.000262
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL			0.002070						0.002070		0.002070
	Ice cream wrappers	NBEV	0.000012	0.000007	0.000036	0.000014				0.000005	0.000024	0.000050	0.000074
	Junk mail/free circulars	NBEV		0.001566	0.004002	0.002262		0.003132	0.001044	0.000522	0.009048	0.003480	0.012528
	Newspapers & magazines	NBEV		0.004720	0.024780	0.005900		0.007080	0.001180		0.029500	0.014160	0.043660
	Other paper (including tissues)	NBEV	0.000240	0.001068	0.003184	0.001447	0.000389	0.000635	0.000524	0.000406	0.006689	0.001203	0.007892
	Packages & boxes	NBEV		0.000640	0.012160	0.004640	0.000080	0.000800	0.000960	0.000080	0.017680	0.001680	0.019360
	Paper bags	NBEV	0.000011	0.000159	0.000783	0.000286	0.000074	0.000021	0.000063	0.000063	0.001270	0.000190	0.001460
	Shopper dockets & related shopping paper (eg. lists)	NBEV		0.000108	0.000024	0.000022	0.000004	0.000012	0.000039	0.000059	0.000205	0.000063	0.000268
	Tickets, e.g. bus, ATM, vending machine etc.	NBEV		0.000008	0.000009	0.000008		0.000002	0.000006	0.000008	0.000030	0.000011	0.000040
<b>TOTAL</b>			<b>0.001720</b>	<b>0.028452</b>	<b>0.221079</b>	<b>0.070053</b>	<b>0.003463</b>	<b>0.021195</b>	<b>0.004763</b>	<b>0.006313</b>	<b>0.309152</b>	<b>0.047885</b>	<b>0.357037</b>

KESAB - Litter Strategy Monitoring - Wave 49 - May 2010			Volume - Cubic Metres									TOTAL VOLUME		
			BEACH	CAR PARK	HIGHWAY	INDUSTRIAL	RECREATIONAL PARK	RESIDENTIAL	RETAIL	SHOPPING CENTRE	METROPOLITAN		REGIONAL	
PLASTIC	6 ring can holders	NBEV		0.000006	0.000003							0.000006	0.000003	0.000009
	Bags - heavier glossy typically branded carry bags	NBEV	0.000088		0.001752							0.001314	0.000526	0.001840
	Bags - supermarket type light weight carry bags	NBEV	0.000102	0.000238	0.002546	0.000170		0.000136		0.000102		0.002308	0.000984	0.003292
	Bread bag tags	NBEV	0.000000	0.000001	0.000001	0.000001	0.000005	0.000000				0.000004	0.000005	0.000009
	Containers, domestic type	NBEV			0.133184	0.124860		0.041620				0.258044	0.041620	0.299664
	Containers, industrial e.g. oil	NBEV			0.134748							0.067374	0.067374	0.134748
	Drink pouches	CDL												0.000000
	Flav. water/fruit j. drink/sports drink (non-carb), <1 litre	CDL	0.000556		0.002781			0.000556				0.003337	0.000556	0.003893
	Flav. water/fruit j. drink/sports drink (non-carb), 1 litre+	CDL			0.001654			0.001654				0.001654	0.001654	0.003308
	Flav. water/soft drink (carbonated), <1 litre	CDL			0.004355							0.003733	0.000622	0.004355
	Flav. water/soft drink (carbonated), 1 litre+	CDL			0.004962							0.004962		0.004962
	Flavoured milk, <1 litre	CDL			0.000533								0.000533	0.000533
	Flavoured milk, 1 litre+	BEV	0.002137									0.002137		0.002137
	Fruit juice, <1 litre	CDL			0.000533							0.000533		0.000533
	Fruit juice, 1 litre+	BEV		0.002137								0.002137		0.002137
	Lollipop sticks	NBEV	0.000002	0.000013	0.000007	0.000005	0.000016	0.000005	0.000003	0.000007		0.000048	0.000011	0.000059
	Other plastic	NBEV	0.000063	0.000134	0.000570	0.000305	0.000064	0.000146	0.000065	0.000039		0.001118	0.000268	0.001385
	Packing tape & straps	NBEV		0.000001	0.000020	0.000011	0.000001	0.000001	0.000001			0.000030	0.000005	0.000035
	Plain water (carbonated or non-carb), <1 litre	CDL		0.000788		0.000788				0.000788		0.002364		0.002364
	Plain water (carbonated or non-carb), 1 litre+	CDL												0.000000
	Plastic bottle tops	NBEV	0.000096	0.000256	0.000656	0.000448	0.000080	0.000192	0.000080	0.000056		0.001513	0.000352	0.001865
	Sacks - sheeting - other bags	NBEV		0.000003	0.000014	0.000011		0.000000	0.000001			0.000028	0.000002	0.000030
	Snack bags & confectionery wrappers	NBEV	0.000157	0.001151	0.000893	0.000392	0.000392	0.000258	0.000125	0.000110		0.002819	0.000658	0.003477
	Spoons/cutlery	NBEV	0.000058	0.000048	0.000173	0.000058	0.000106	0.000019	0.000029	0.000038		0.000307	0.000221	0.000528
	Straws	NBEV	0.000083	0.000227	0.000417	0.000083	0.000078	0.000066	0.000058	0.000132		0.000825	0.000318	0.001143
	Styrene foam boxes, sheets, etc.	NBEV	0.000038	0.000113	0.003788	0.002363	0.000075	0.000075	0.000038	0.000038		0.005850	0.000675	0.006525
	Take away & cups	NBEV	0.000621	0.002898	0.023807	0.004140	0.001449	0.000828	0.001656	0.001242		0.027327	0.009316	0.036643
	White milk, all sizes	BEV			0.008547	0.002137						0.004273	0.006410	0.010683
Wine cask bladders	BEV			0.000920								0.000920	0.000920	
<b>TOTAL</b>		<b>0.003998</b>	<b>0.008012</b>	<b>0.326862</b>	<b>0.135770</b>	<b>0.002265</b>	<b>0.045558</b>	<b>0.002056</b>	<b>0.002552</b>		<b>0.394043</b>	<b>0.133031</b>	<b>0.527074</b>	
<b>GRAND TOTAL</b>		<b>0.008668</b>	<b>0.067086</b>	<b>0.861092</b>	<b>0.572955</b>	<b>0.030741</b>	<b>0.201668</b>	<b>0.009061</b>	<b>0.010173</b>		<b>1.492708</b>	<b>0.268736</b>	<b>1.761444</b>	

# *Appendix 1: Tracking Graphs*

### Weighting of Previous Results

Since February 2006 (Wave 32), 11 revised sites have been surveyed concurrently with the 151 original sites included within the litter monitor program since its inception in February 1998. The new and old sites were surveyed simultaneously across four Waves of the monitor.

These 11 revised sites have previously been surveyed concurrently with the 151 original sites to replace 11 of the original sites that were found to be unusual in nature, and analyses have typically focused on results for the 151 sites including the 11 *new* sites and the 151 sites including the 11 *old* sites separately.

However, in counts since the February 2007 Monitor only the 151 revised sites (incorporating the 11 new locations) have been surveyed. In order to facilitate tracking comparisons, figures prior to February 2007 have been weighted based upon the variations between results corresponding to the 151 sites including the 11 new sites and the 151 sites including the 11 old sites.

Weighting techniques were based upon comparisons of figures for items and volumes recorded during Waves 32, 33, 34 and 35 across all sites incorporating either the 11 original or 11 revised sites. Differences between such figures provided indices of the degree of consistent variation between original and revised site litter data, and reliable weightings were thereby established.

Figures which have been weighted included:

- **Absolute values (counts and volumes) within material categories and site types**, since the inclusion of the revised sites resulted in differences in nearly all absolute values of counted litter.
- **Comparisons between proportional representation of litter across site types**, due to the fact that site revision altered the proportions of litter contributed to the total litter stream within certain site categories whilst others remained unchanged.

However, preliminary investigations demonstrated that proportional contribution to the total litter stream within material types was consistently similar between the original and revised site sets. This finding supports the assumption that whilst the quantities of litter recorded differed between old and new sites, the types of materials present within such litter were relatively consistent. For this reason, proportional figures within material types did not require weighting.

Items within material categories across all 151 sites including either 11 original or 11 revised sites	Wave 32				Wave 33				Wave 34				Wave 35			
	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old
Glass	419	311	108	0.74224344	349	293	56	0.83954155	321	281	40	0.87538941	305	249	56	0.81639344
Metal	1505	1218	287	0.80930233	1450	1099	351	0.75793103	1440	1086	354	0.75416667	1517	1183	334	0.77982861
Plastic	5447	3819	1628	0.70111988	5261	3866	1395	0.73484128	5057	3575	1482	0.70694087	5332	3827	1505	0.71774194
Paper/ paperboard	4299	2969	1330	0.69062573	3820	3003	817	0.78612565	4017	2961	1056	0.73711725	3616	2752	864	0.76106195
Miscellaneous	1286	975	311	0.75816485	1057	814	243	0.77010407	1025	815	210	0.79512195	1150	944	206	0.82086957
Cigarette Butts	7600	5744	1856	0.75578947	9606	6814	2792	0.70934832	10950	6959	3991	0.63552511	10875	6474	4401	0.59531034
<b>TOTAL</b>	<b>20556</b>	<b>15036</b>	<b>5520</b>	<b>0.73146527</b>	<b>21543</b>	<b>15889</b>	<b>5654</b>	<b>0.73754816</b>	<b>22810</b>	<b>15677</b>	<b>7133</b>	<b>0.68728628</b>	<b>22795</b>	<b>15429</b>	<b>7366</b>	<b>0.67685896</b>
<b>AVERAGE New as % of Old</b>				<b>0.74124442</b>				<b>0.76220572</b>				<b>0.74164965</b>				<b>0.73829497</b>
<b>OVERALL Mean New as % of Old</b>	<b>0.7458</b>															

Items within site type across all 151 sites including either 11 original or 11 revised sites		Residential	Beach	Industrial	Car Park	Shopping Centre	Retail	Recreational Park	Highway	Metropolitan	Regional	TOTAL
		Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff
<b>Wave 32</b>	Old	1187	1016	2395	2194	1261	1517	617	10369	17020	3536	20556
	New	1187	1016	2196	2064	1292	1517	617	5147	11500	3536	15036
	Diff	0	0	199	130	-31	0	0	5222	5520	0	5520
	<b>New as % of Old</b>	1	1	0.92	0.94	1.02	1	1	0.50	0.68	1	7.3786248
<b>Wave 33</b>	Old	1227	737	2573	3142	2323	1659	590	9292	17788	3755	21543
	New	1227	737	2428	2722	1919	1659	590	4607	12134	3755	15889
	Diff	0	0	145	420	404	0	0	4685	5654	0	5654
	<b>New as % of Old</b>	1	1	0.94	0.87	0.83	1	1	0.50	0.68	1	7.1318625
<b>Wave 34</b>	Old	1185	721	2498	3365	1853	1670	479	11039	18749	4061	22810
	New	1185	721	2077	2724	1155	1670	479	5666	11616	4061	15677
	Diff	0	0	421	641	698	0	0	5373	7133	0	7133
	<b>New as % of Old</b>	1	1	0.83	0.81	0.62	1	1	0.51	0.62	1	6.7775595
<b>Wave 35</b>	Old	1134	728	2705	2601	2232	1801	729	10865	18640	4155	22795
	New	1134	728	2399	2156	1157	1801	729	5325	11274	4155	15429
	Diff	0	0	306	445	1075	0	0	5540	7366	0	7366
	<b>New as % of Old</b>	1	1	0.89	0.83	0.52	1	1	0.49	0.60	1	6.7242631
<b>Average New as % of Old</b>		<b>1</b>	<b>1</b>	<b>0.89</b>	<b>0.86</b>	<b>0.75</b>	<b>1</b>	<b>1</b>	<b>0.50</b>	<b>0.65</b>	<b>1</b>	<b>7.0030775</b>

Proportions of total items within site type across all 151 sites including either 11 original or 11 revised sites		Residential	Beach	Industrial	Car Park	Shopping Centre	Retail	Recreational Park	Highway	Metropolitan	Regional	TOTAL
<b>Wave 32</b>	Old	1187	1016	2395	2194	1261	1517	617	10369	17020	3536	<b>20556</b>
	New	1187	1016	2196	2064	1292	1517	617	5147	11500	3536	<b>15036</b>
	Old % of total items	5.8%	4.9%	11.7%	10.7%	6.1%	7.4%	3.0%	50.4%	82.8%	17.2%	
	New % of total items	7.9%	6.8%	14.6%	13.7%	8.6%	10.1%	4.1%	34.2%	76.5%	23.5%	
	<b>% change from Old to New</b>	<b>2.1%</b>	<b>1.8%</b>	<b>3.0%</b>	<b>3.1%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>1.1%</b>	<b>-16.2%</b>	<b>-6.3%</b>	<b>6.3%</b>	
<b>Wave 33</b>	Old	1227	737	2573	3142	2323	1659	590	9292	17788	3755	<b>21543</b>
	New	1227	737	2428	2722	1919	1659	590	4607	12134	3755	<b>15889</b>
	Old % of total items	5.7%	3.4%	11.9%	14.6%	10.8%	7.7%	2.7%	43.1%	82.6%	17.4%	
	New % of total items	7.7%	4.6%	15.3%	17.1%	12.1%	10.4%	3.7%	29.0%	76.4%	23.6%	
	<b>% change from Old to New</b>	<b>2.0%</b>	<b>1.2%</b>	<b>3.3%</b>	<b>2.5%</b>	<b>1.3%</b>	<b>2.7%</b>	<b>1.0%</b>	<b>-14.1%</b>	<b>-6.2%</b>	<b>6.2%</b>	
<b>Wave 34</b>	Old	1185	721	2498	3365	1853	1670	479	11039	18749	4061	<b>22810</b>
	New	1185	721	2077	2724	1155	1670	479	5666	11616	4061	<b>15677</b>
	Old % of total items	5.2%	3.2%	11.0%	14.8%	8.1%	7.3%	2.1%	48.4%	82.2%	17.8%	
	New % of total items	7.6%	4.6%	13.2%	17.4%	7.4%	10.7%	3.1%	36.1%	74.1%	25.9%	
	<b>% change from Old to New</b>	<b>2.4%</b>	<b>1.4%</b>	<b>2.3%</b>	<b>2.6%</b>	<b>-0.8%</b>	<b>3.3%</b>	<b>1.0%</b>	<b>-12.3%</b>	<b>-8.1%</b>	<b>8.1%</b>	
<b>Wave 35</b>	Old	1134	728	2705	2601	2232	1801	729	10865	18640	4155	<b>22795</b>
	New	1134	728	2399	2156	1157	1801	729	5325	11274	4155	<b>15429</b>
	Old % of total items	5.0%	3.2%	11.9%	11.4%	9.8%	7.9%	3.2%	47.7%	81.8%	18.2%	
	New % of total items	7.3%	4.7%	15.5%	14.0%	7.5%	11.7%	4.7%	34.5%	73.1%	26.9%	
	<b>% change from Old to New</b>	<b>2.4%</b>	<b>1.5%</b>	<b>3.7%</b>	<b>2.6%</b>	<b>-2.3%</b>	<b>3.8%</b>	<b>1.5%</b>	<b>-13.2%</b>	<b>-8.7%</b>	<b>8.7%</b>	
<b>Average % difference from Old to New</b>		<b>2%</b>	<b>1%</b>	<b>3%</b>	<b>3%</b>	<b>0%</b>	<b>3%</b>	<b>1%</b>	<b>-14%</b>	<b>-7%</b>	<b>7%</b>	

Volumes within material categories across all 151 sites including either 11 original or 11 revised sites	Wave 32				Wave 33				Wave 34				Wave 35			
	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old
Glass	0.11965	0.09027	0.02939	<b>0.75438</b>	0.08663	0.06859	0.01804	<b>0.79173</b>	0.08559	0.07086	0.01473	<b>0.82789</b>	0.06907	0.05316	0.01591	<b>0.76962</b>
Metal	0.22261	0.19846	0.02415	<b>0.8915</b>	0.15196	0.13181	0.02015	<b>0.86741</b>	0.15085	0.10952	0.04132	<b>0.72605</b>	0.17499	0.15130	0.02369	<b>0.86463</b>
Plastic	1.16278	0.72042	0.44235	<b>0.61957</b>	0.90407	0.71848	0.18559	<b>0.79472</b>	0.93411	0.63312	0.30099	<b>0.67778</b>	0.88814	0.67589	0.21225	<b>0.76102</b>
Paper/ paperboard	0.71375	0.41932	0.29443	<b>0.58749</b>	0.47904	0.36017	0.11888	<b>0.75184</b>	0.54568	0.35535	0.19033	<b>0.6512</b>	0.50410	0.35413	0.14998	<b>0.70249</b>
Miscellaneous	1.11014	0.83415	0.27599	<b>0.75139</b>	0.84900	0.61172	0.23727	<b>0.72052</b>	0.78143	0.71261	0.06882	<b>0.91194</b>	2.14021	1.97182	0.16839	<b>0.92132</b>
Cigarette Butts	0.00009	0.00007	0.00002	<b>0.75515</b>	0.00011	0.00008	0.00003	<b>0.70935</b>	0.00013	0.00008	0.00005	<b>0.63553</b>	0.00013	0.00007	0.00005	<b>0.59531</b>
<b>TOTAL</b>	<b>3.32902</b>	<b>2.26269</b>	<b>1.06633</b>	<b>0.67969</b>	<b>2.47082</b>	<b>1.89085</b>	<b>0.57996</b>	<b>0.76528</b>	<b>2.49778</b>	<b>1.88155</b>	<b>0.61624</b>	<b>0.75329</b>	<b>3.77664</b>	<b>3.20638</b>	<b>0.57026</b>	<b>0.849</b>
<b>AVERAGE New as % of Old</b>				<b>0.71988</b>				<b>0.77155</b>				<b>0.74052</b>				<b>0.78049</b>
<b>OVERALL MEAN DIFFERENCE</b>	<b>0.7531</b>															

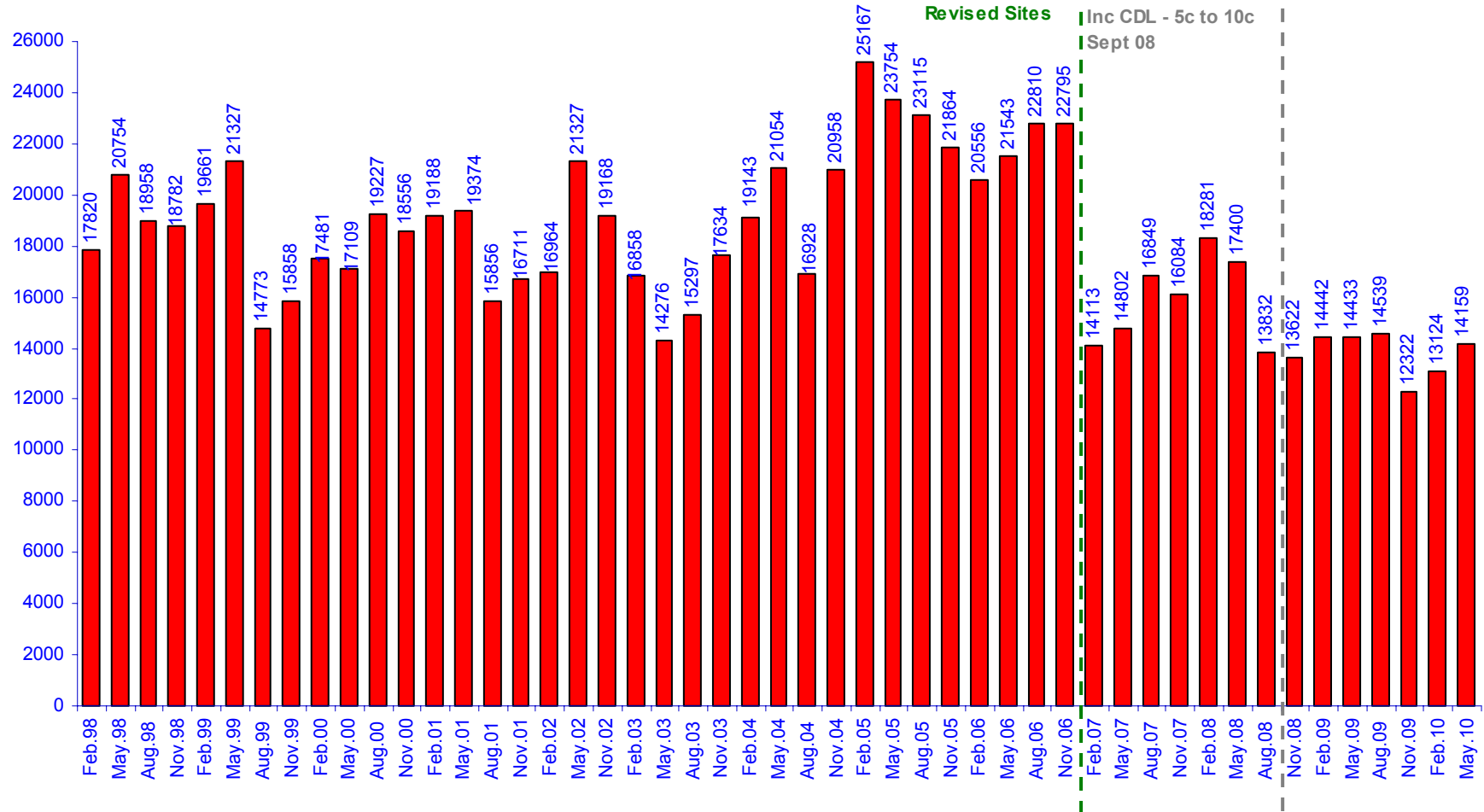
Volumes within site type across all 151 sites including either 11 original or 11 revised sites		Residential	Beach	Industrial	Car Park	Shopping Centre	Retail	Recreational Park	Highway	Metropolitan	Regional	TOTAL
		Old	New	Diff	New as % of Old	Old	New	Diff	New as % of Old	Old	New	Diff
<b>Wave 32</b>	Old	0.05441	0.02998	0.57970	0.13090	0.01177	0.01877	0.02922	2.47428	2.54585	0.78318	3.32902
	New	0.05441	0.02998	0.57922	0.17275	0.00965	0.01877	0.02922	1.36868	1.47951	0.78318	2.26269
	Diff			0.00048	-0.04186	0.00212			1.10559	1.06633		
	<b>New as % of Old</b>	1	1	0.99917	1.31979	0.82005	1	1	0.55317	0.58115	1	
<b>Wave 33</b>	Old	0.06600	0.03600	0.54200	0.07100	0.03000	0.02100	0.04100	1.66400	1.85500	0.61500	2.47100
	New	0.06600	0.03600	0.53900	0.07000	0.01000	0.02100	0.04100	1.10700	1.27500	0.61500	1.89000
	Diff			0.00300	0.00100	0.02000			0.55700	0.58000		
	<b>New as % of Old</b>	1	1	0.99446	0.98592	0.33333	1	1	0.66526	0.68733	1	
<b>Wave 34</b>	Old	0.07800	0.06500	0.41100	0.14100	0.05000	0.01200	0.00600	1.73400	1.87300	0.62500	2.49700
	New	0.07800	0.06500	0.40000	0.14000	0.00900	0.01200	0.00600	1.17100	1.25700	0.62500	1.88100
	Diff			0.01100	0.00100	0.04100			0.56300	0.61600		
	<b>New as % of Old</b>	1	1	0.97324	0.99291	0.18000	1	1	0.67532	0.67112	1	
<b>Wave 35</b>	Old	0.17400	0.01700	0.58800	0.13000	0.05300	0.05900	0.01700	2.73700	2.12500	1.65200	3.77500
	New	0.17400	0.01700	0.58600	0.14600	0.03700	0.05900	0.01700	2.16900	1.55500	1.65200	3.20500
	Diff			0.00200	-0.01600	0.01600			0.56800	0.57000		
	<b>New as % of Old</b>	1	1	1.00	1.12	0.70	1	1	0.79	0.73	1	
<b>Average New as % of Old</b>		<b>1</b>	<b>1</b>	<b>0.99</b>	<b>1.11</b>	<b>0.51</b>	<b>1</b>	<b>1</b>	<b>0.67</b>	<b>0.67</b>	<b>1</b>	

Proportions of total volume within site type across all 151 sites including either 11 original or 11 revised sites		Residential	Beach	Industrial	Car Park	Shopping Centre	Retail	Recreational Park	Highway	Metropolitan	Regional	TOTAL
<b>Wave 32</b>	Old	0.05441	0.02998	0.57970	0.13090	0.01177	0.01877	0.02922	2.47428	2.54585	0.78318	<b>3.32902</b>
	New	0.05441	0.02998	0.57922	0.17275	0.00965	0.01877	0.02922	1.36868	1.47951	0.78318	<b>2.26269</b>
	Old % of total volume	1.6%	0.9%	17.4%	3.9%	0.4%	0.6%	0.9%	74.3%	76.5%	23.5%	
	New % of total volume	2.4%	1.3%	25.6%	7.6%	0.4%	0.8%	1.3%	60.5%	65.4%	34.6%	
	<b>% change from Old to New</b>	<b>0.8%</b>	<b>0.4%</b>	<b>8.2%</b>	<b>3.7%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>-13.8%</b>	<b>-11.1%</b>	<b>11.1%</b>	
<b>Wave 33</b>	Old	0.06600	0.03600	0.54200	0.07100	0.03000	0.02100	0.04100	1.66400	1.85500	0.61500	<b>2.47100</b>
	New	0.06600	0.03600	0.53900	0.07000	0.01000	0.02100	0.04100	1.10700	1.27500	0.61500	<b>1.89000</b>
	Old % of total volume	2.7%	1.5%	21.9%	2.9%	1.2%	0.8%	1.7%	67.3%	75.1%	24.9%	
	New % of total volume	3.5%	1.9%	28.5%	3.7%	0.5%	1.1%	2.2%	58.6%	67.5%	32.5%	
	<b>% change from Old to New</b>	<b>0.8%</b>	<b>0.4%</b>	<b>6.6%</b>	<b>0.8%</b>	<b>-0.7%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>-8.8%</b>	<b>-7.6%</b>	<b>7.7%</b>	
<b>Wave 34</b>	Old	0.07800	0.06500	0.41100	0.14100	0.05000	0.01200	0.00600	1.73400	1.87300	0.62500	<b>2.49700</b>
	New	0.07800	0.06500	0.40000	0.14000	0.00900	0.01200	0.00600	1.17100	1.25700	0.62500	<b>1.88100</b>
	Old % of total volume	3.1%	2.6%	16.5%	5.6%	2.0%	0.5%	0.2%	69.4%	75.0%	25.0%	
	New % of total volume	4.1%	3.5%	21.3%	7.4%	0.5%	0.6%	0.3%	62.3%	66.8%	33.2%	
	<b>% change from Old to New</b>	<b>1.0%</b>	<b>0.9%</b>	<b>4.8%</b>	<b>1.8%</b>	<b>-1.5%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>-7.2%</b>	<b>-8.2%</b>	<b>8.2%</b>	
<b>Wave 35</b>	Old	0.17400	0.01700	0.58800	0.13000	0.05300	0.05900	0.01700	2.73700	2.12500	1.65200	<b>3.77500</b>
	New	0.17400	0.01700	0.58600	0.14600	0.03700	0.05900	0.01700	2.16900	1.55500	1.65200	<b>3.20500</b>
	Old % of total volume	4.6%	0.5%	15.6%	3.4%	1.4%	1.6%	0.5%	72.5%	56.3%	43.8%	
	New % of total volume	5.4%	0.5%	18.3%	4.6%	1.2%	1.8%	0.5%	67.7%	48.5%	51.5%	
	<b>% change from Old to New</b>	<b>0.8%</b>	<b>0.1%</b>	<b>2.7%</b>	<b>1.1%</b>	<b>-0.2%</b>	<b>0.3%</b>	<b>0.1%</b>	<b>-4.8%</b>	<b>-7.8%</b>	<b>7.8%</b>	
<b>Average % difference from Old to New</b>		<b>1%</b>	<b>0%</b>	<b>6%</b>	<b>2%</b>	<b>-1%</b>	<b>0%</b>	<b>0%</b>	<b>-9%</b>	<b>-9%</b>	<b>9%</b>	

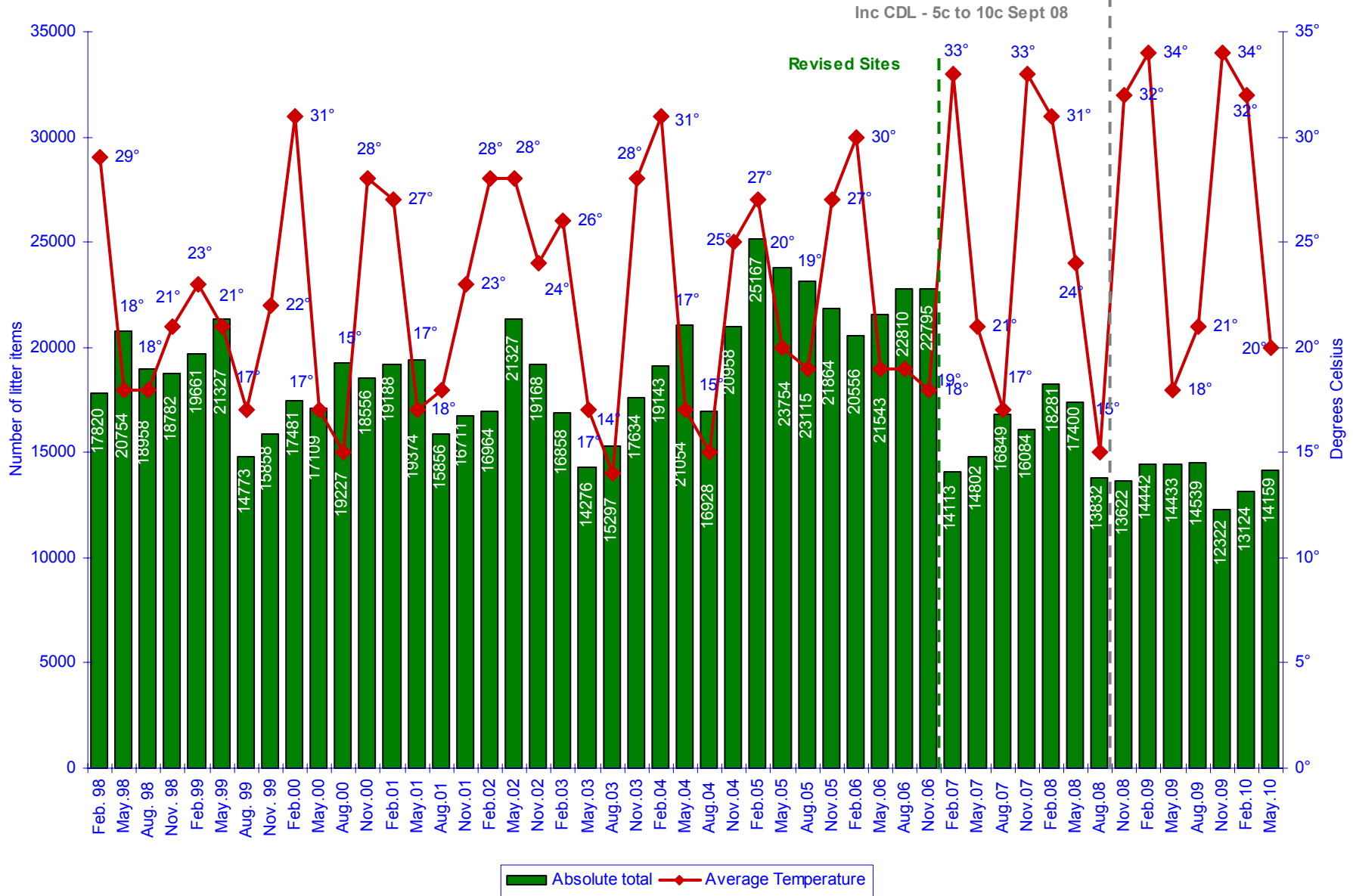
# *Unweighted Tracking Graphs*

## *- Items*

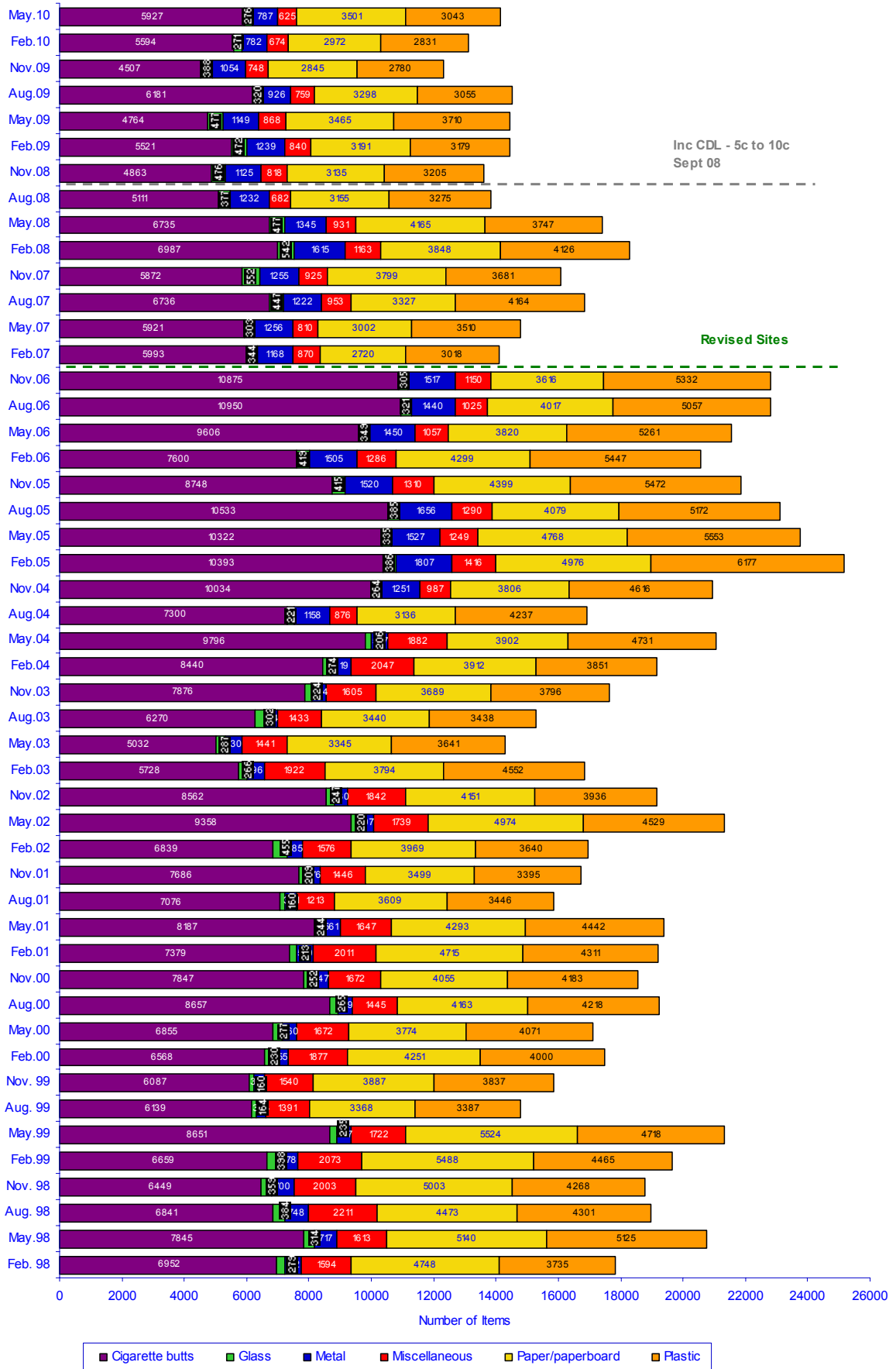
### Total Litter - Number of Items



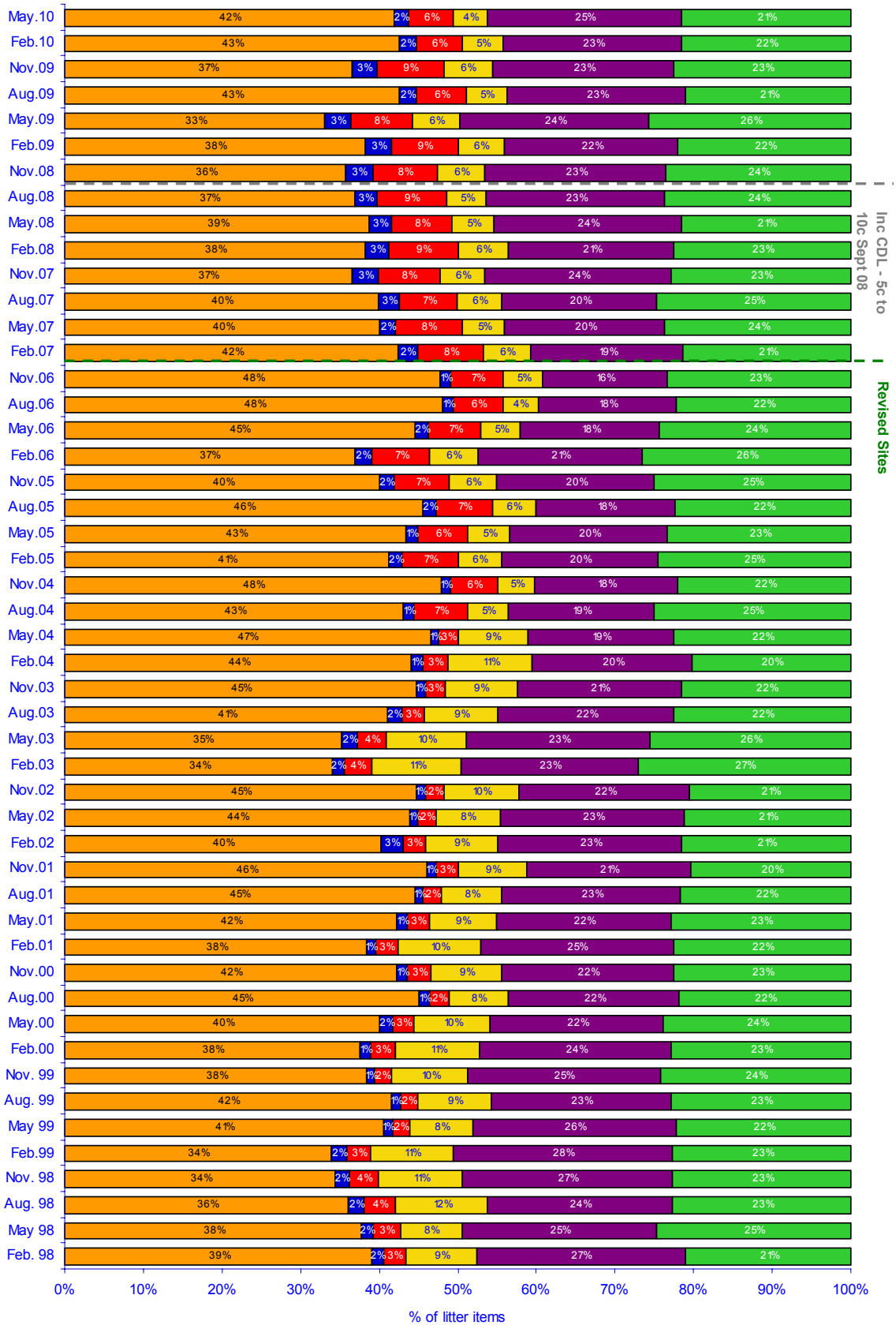
### Weather Temperature and Total Number of Litter Items



### Number of Litter Items by Material Type

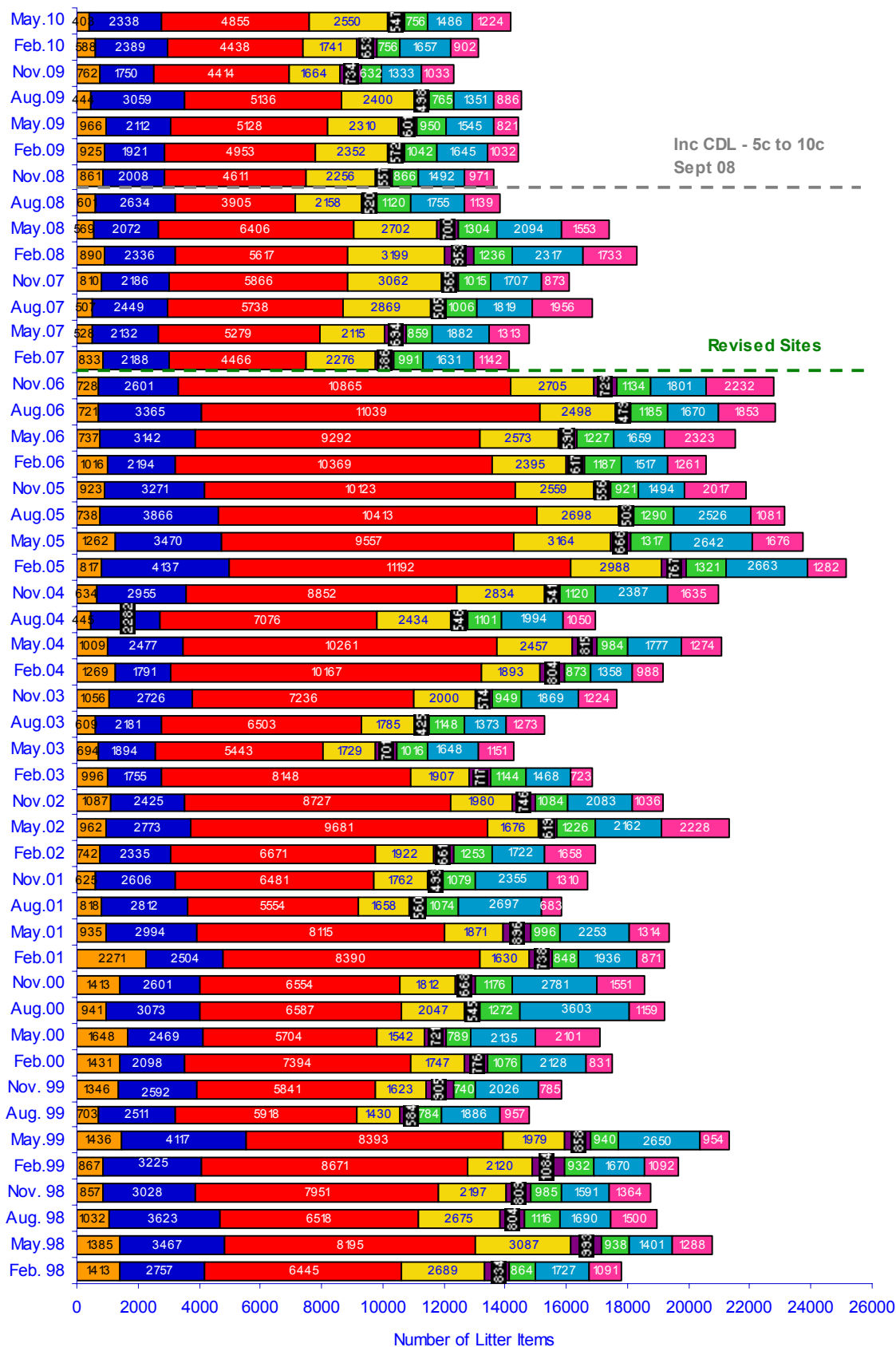


### Proportion of Total Litter Stream by Material Type

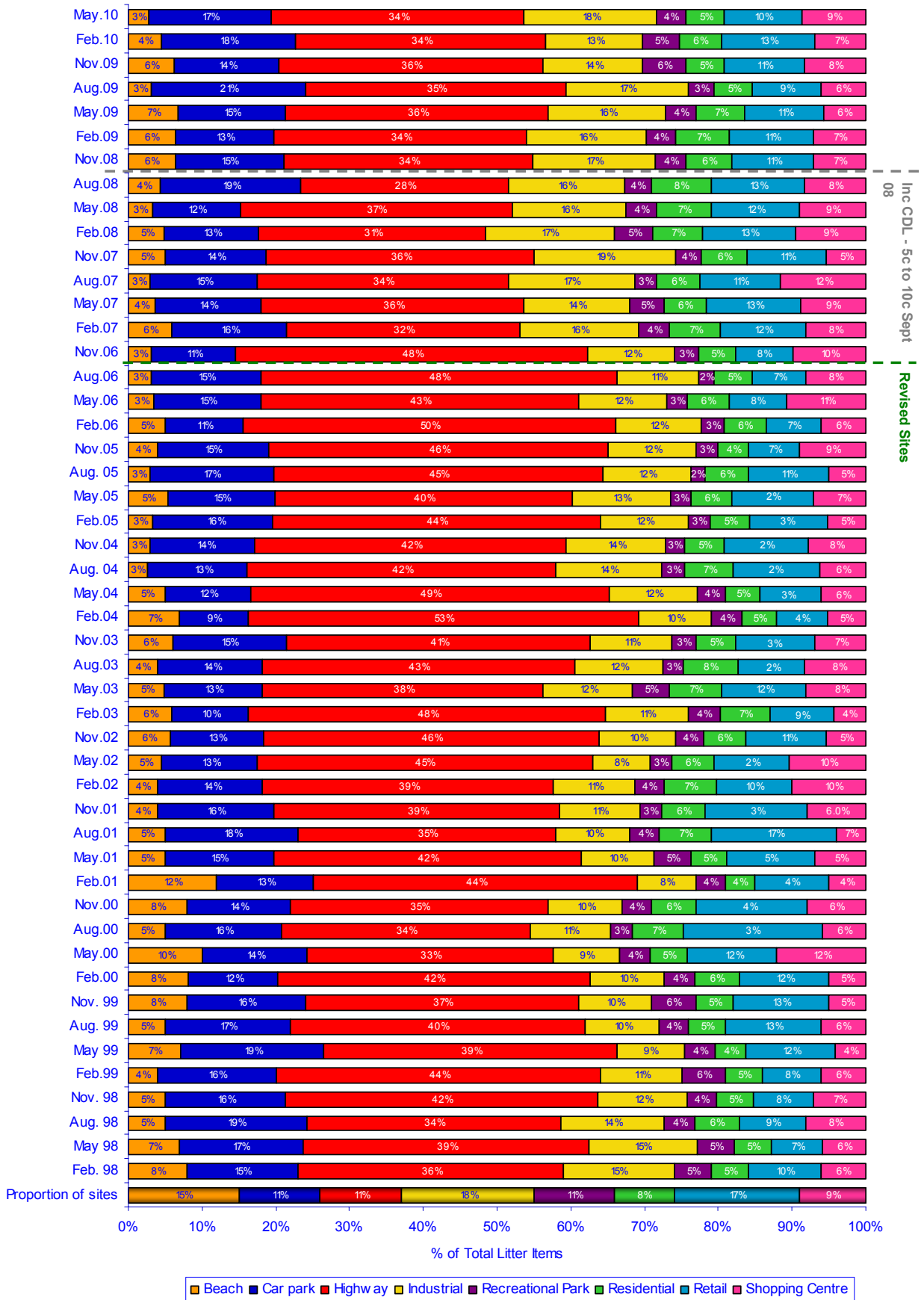


■ Cigarette butts 
 ■ Glass 
 ■ Metal 
 ■ Miscellaneous 
 ■ Paper/paperboard 
 ■ Plastic

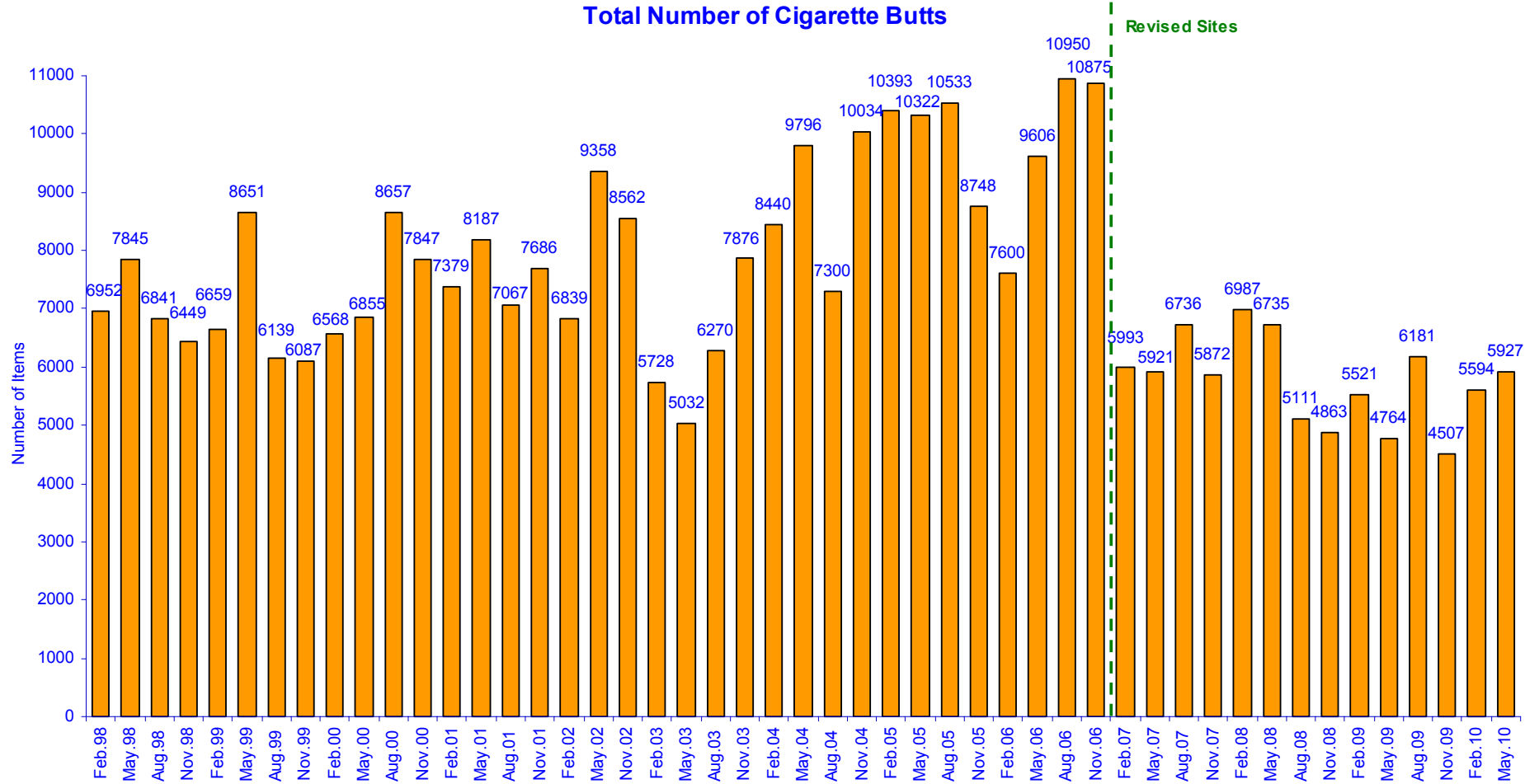
### Number of Litter Items by Site Type



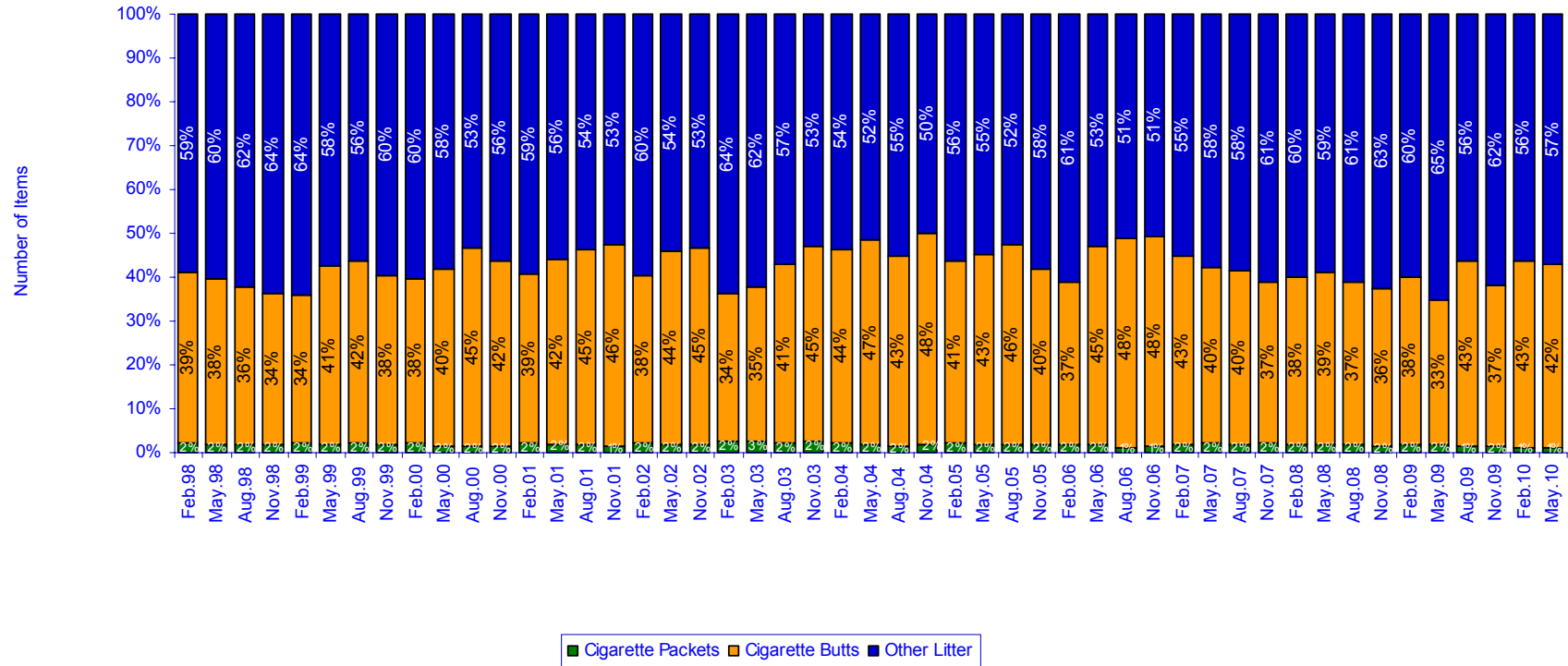
Proportion of Total Litter by Site Type



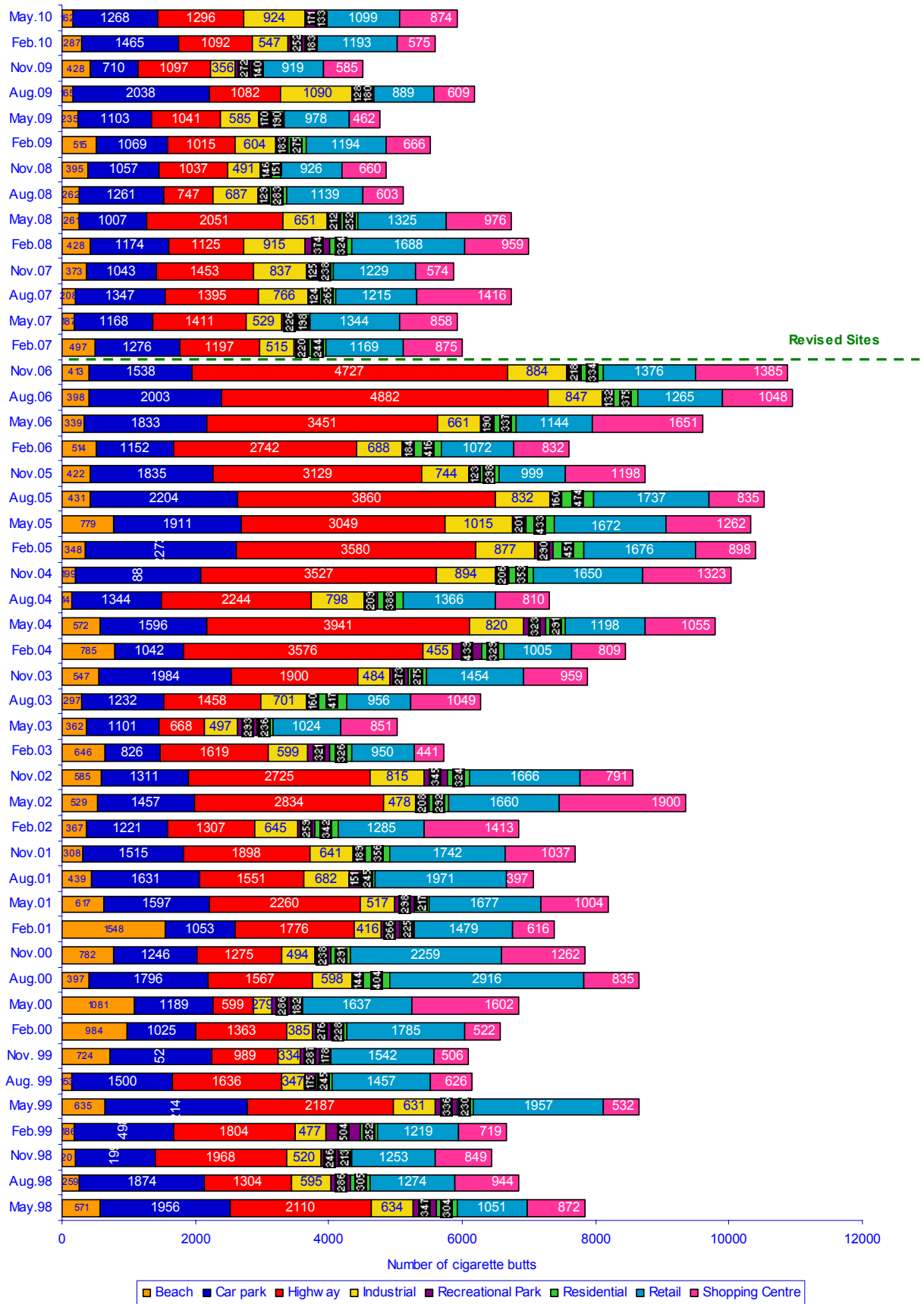
### Total Number of Cigarette Butts



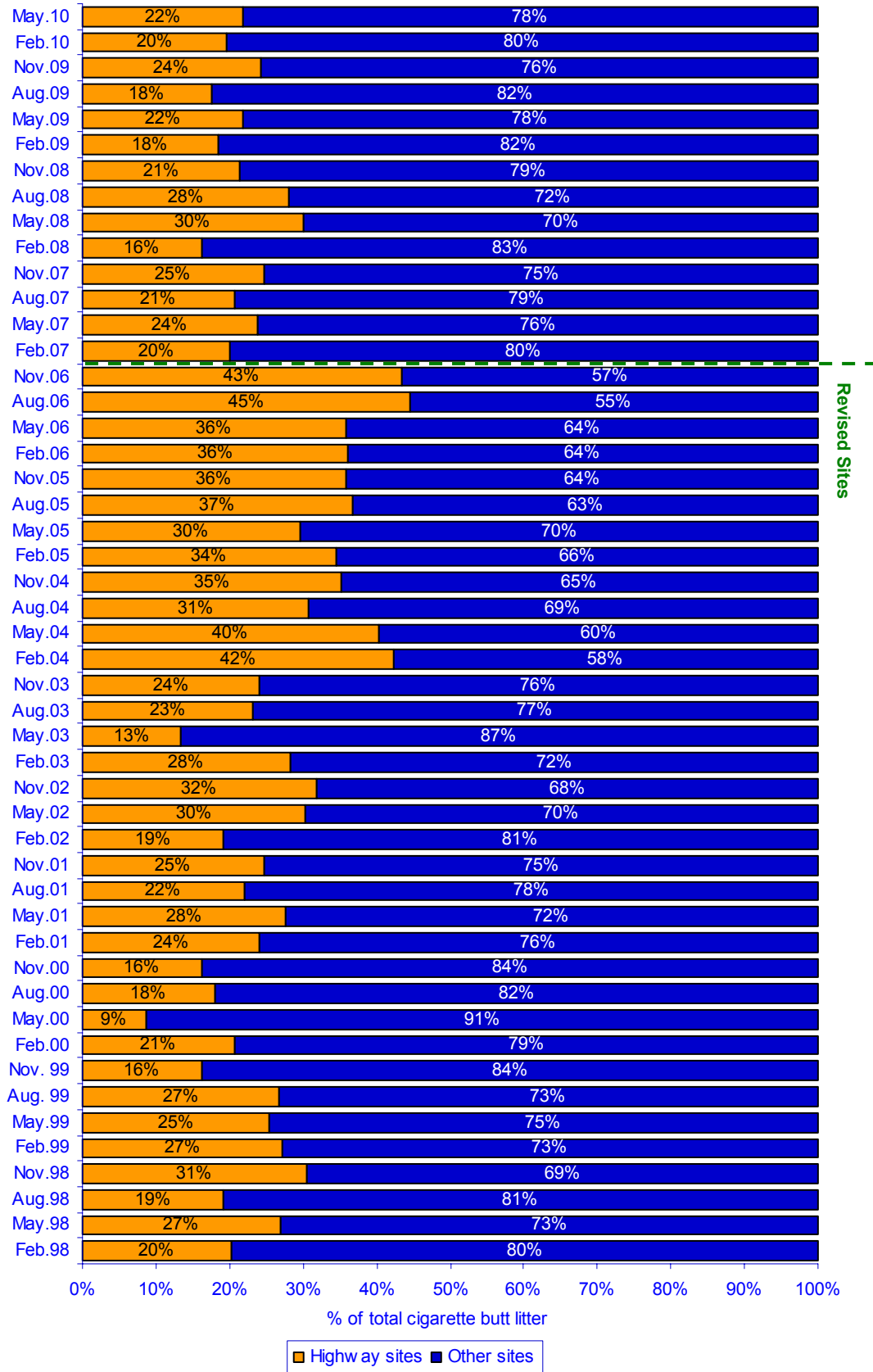
### Proportion of Cigarette Related Litter Items in Total Litter Stream



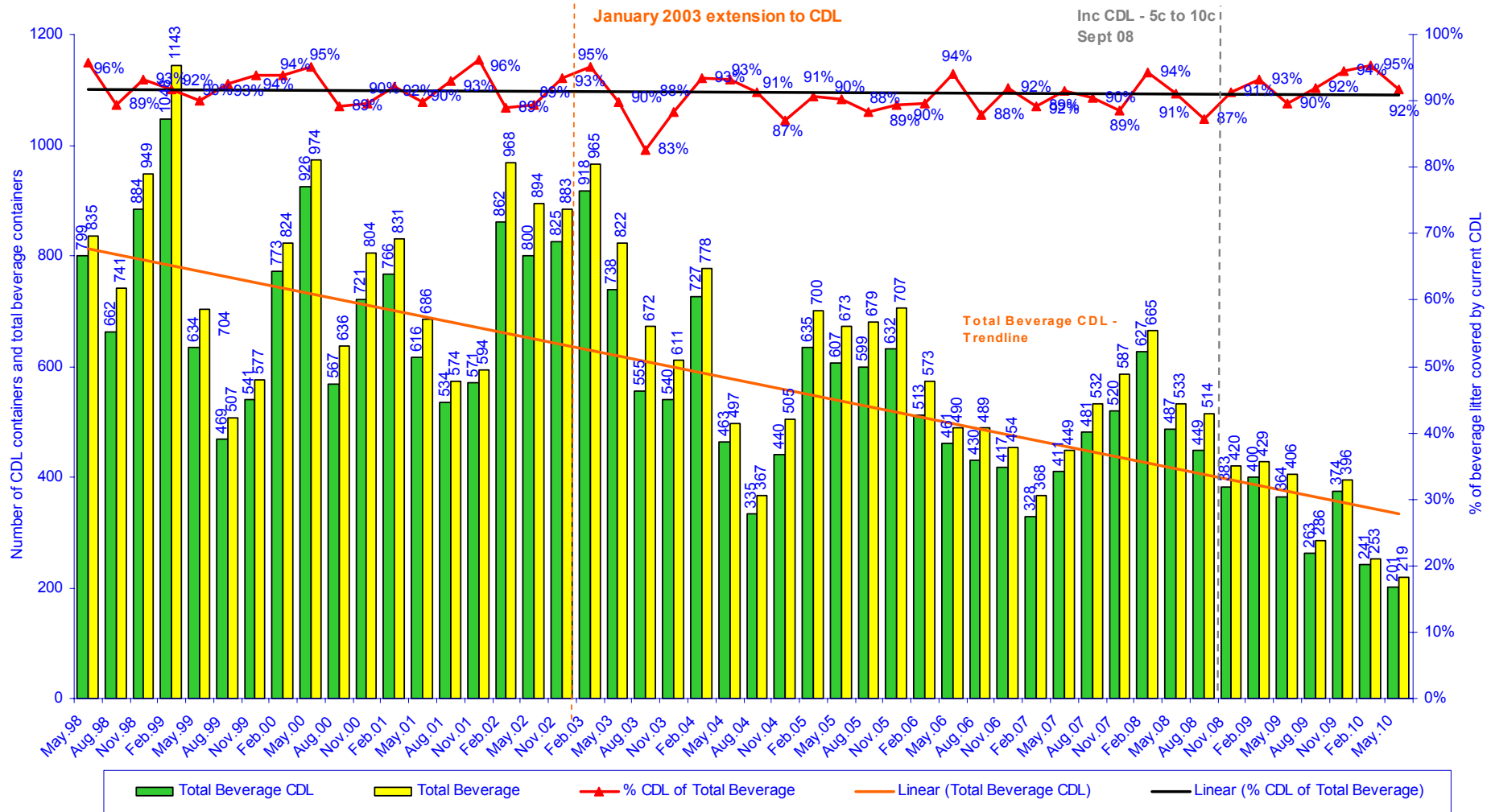
Number of Cigarette Butts by Site Type



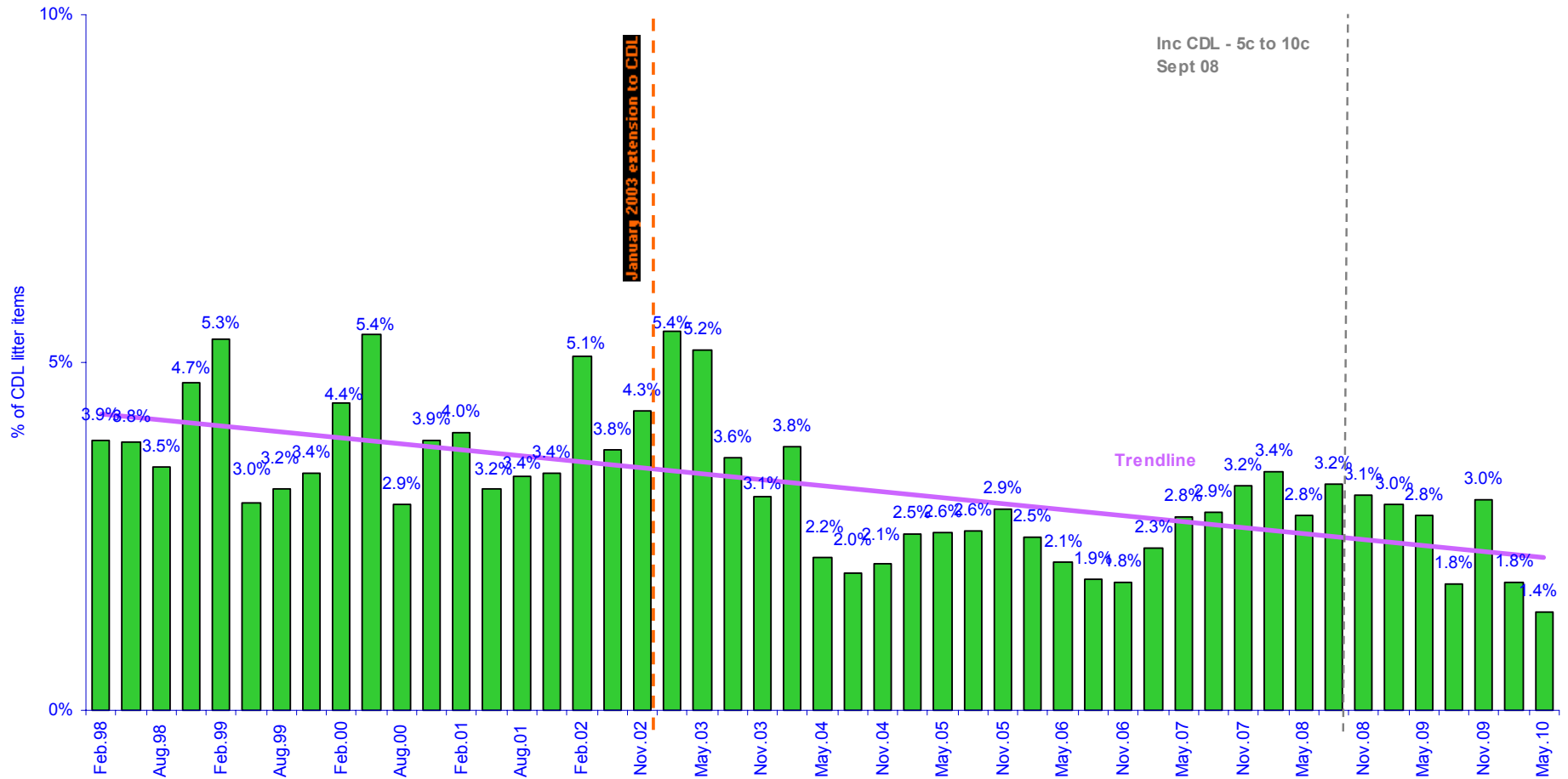
### Proportion of Total Cigarette Butt Litter at Highway sites & Other sites



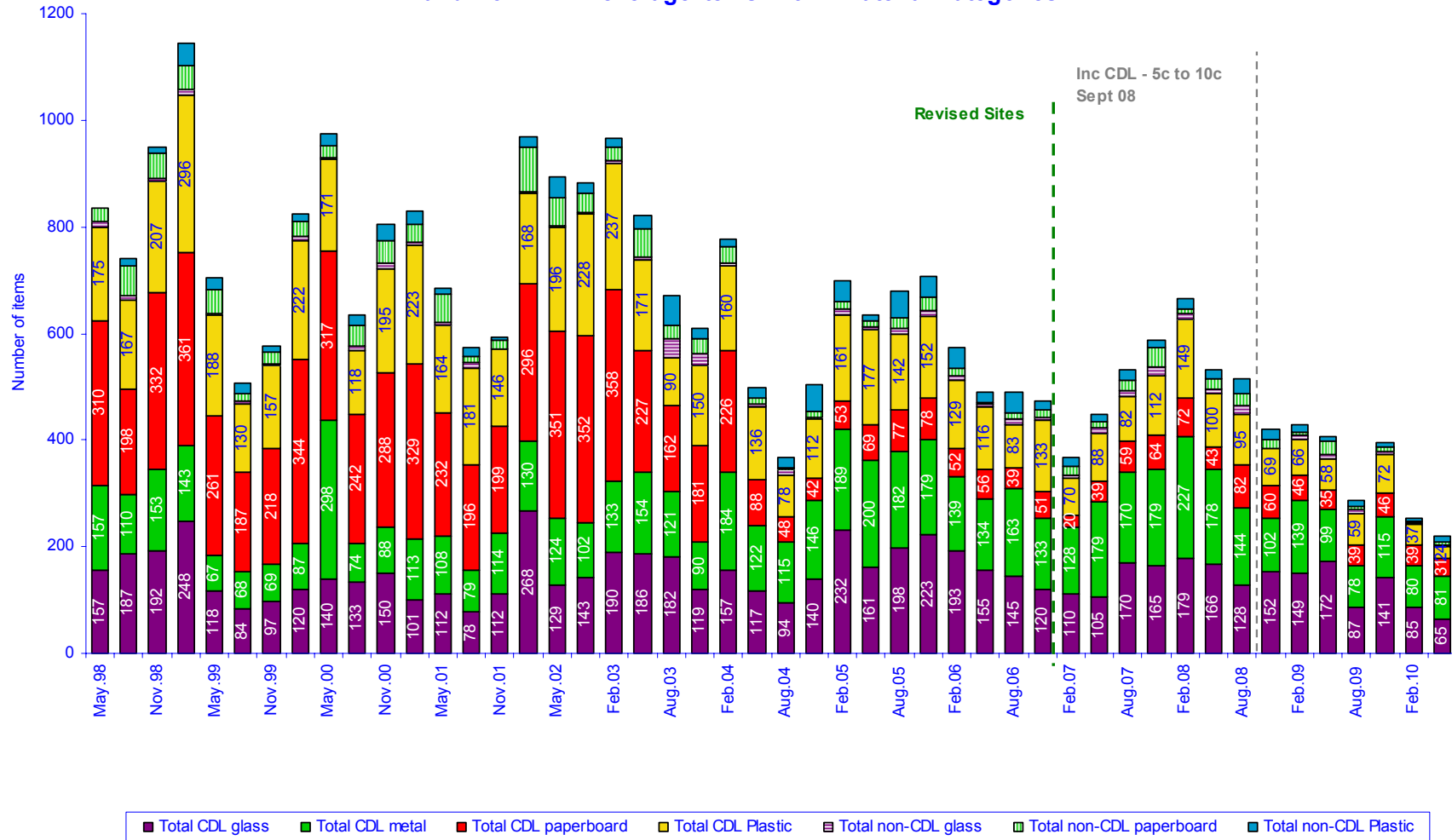
Proportion of Beverage Litter Covered By Current CDL & Total Number of Beverage Litter Items & Containers Covered By Current CDL



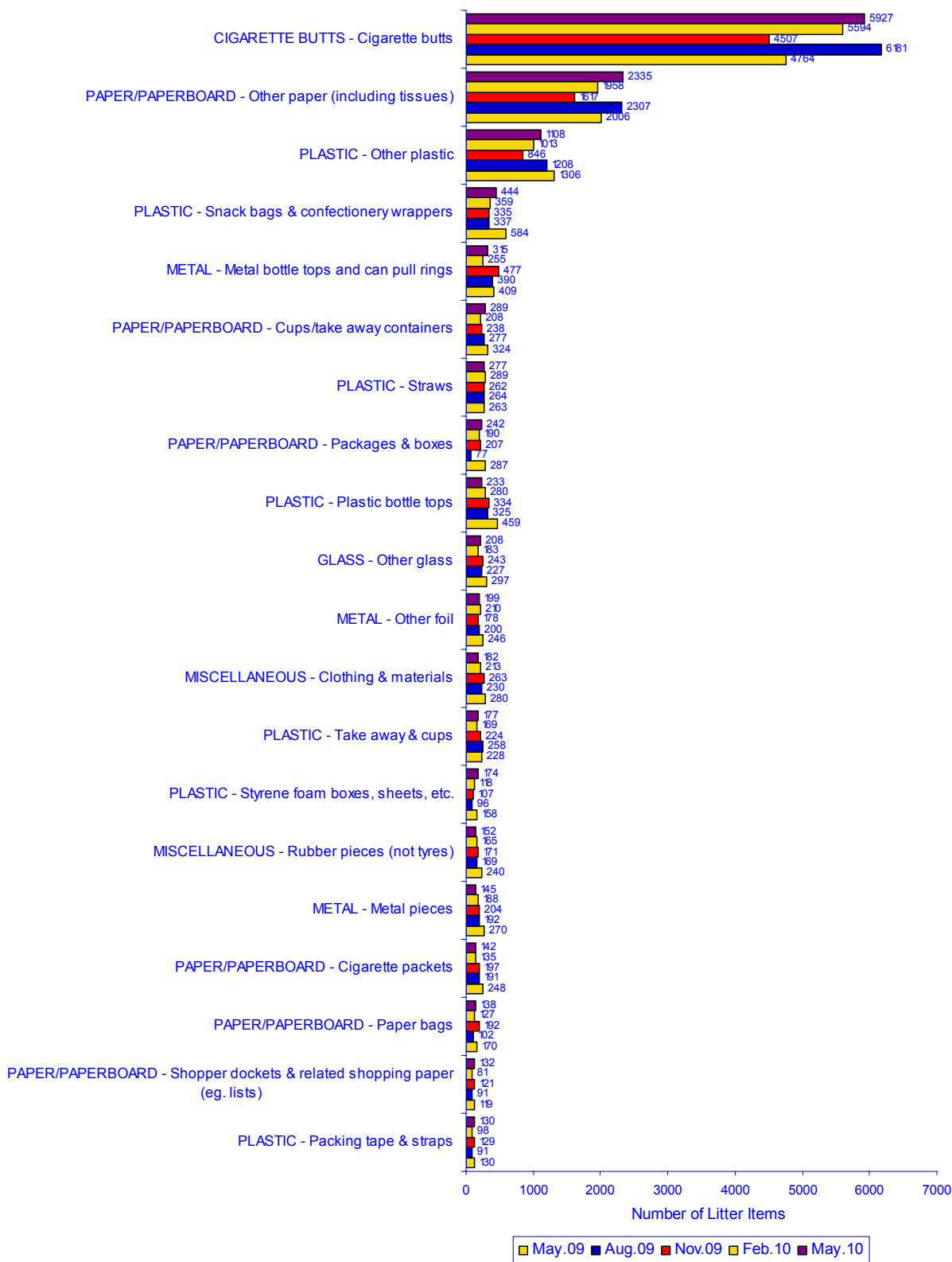
Proportion of Current CDL Litter Items in Total Litter Stream



CDL and Non-CDL Beverage Items Within Material Categories



### Top 20 Litter Items - Highest Counts

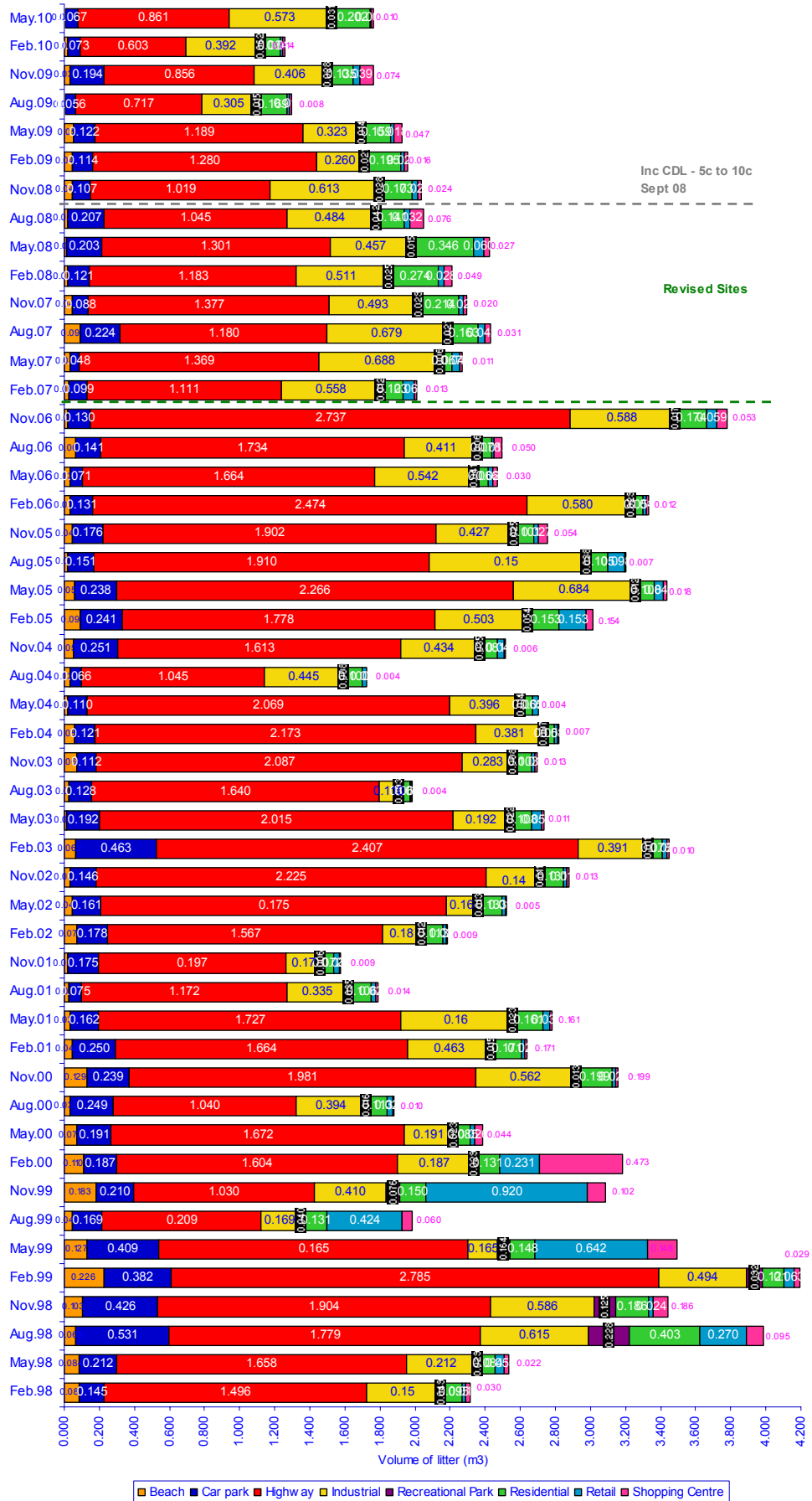


*Unweighted Tracking Graphs*  
*- Volume*

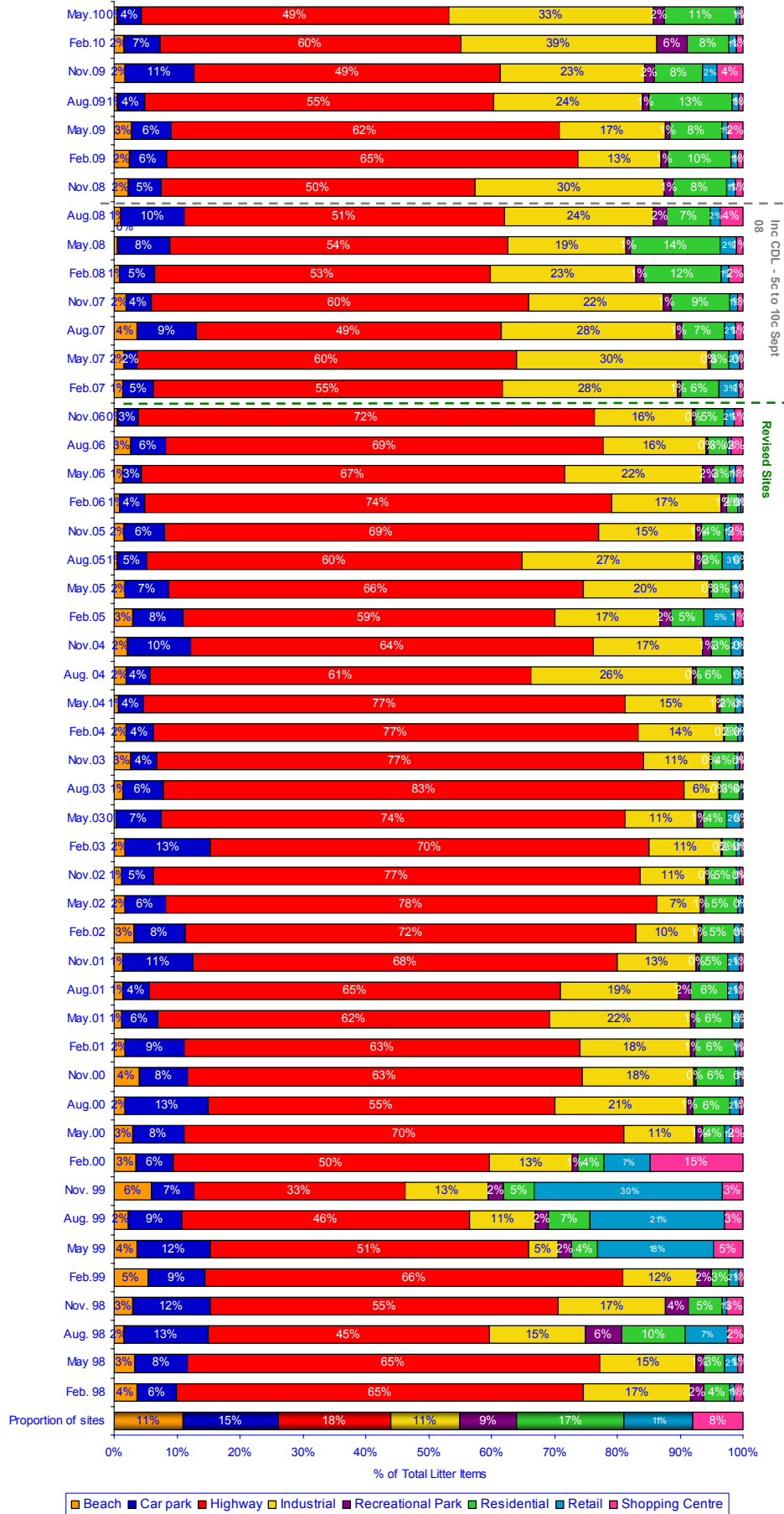
### Top 20 Litter Items by Volume



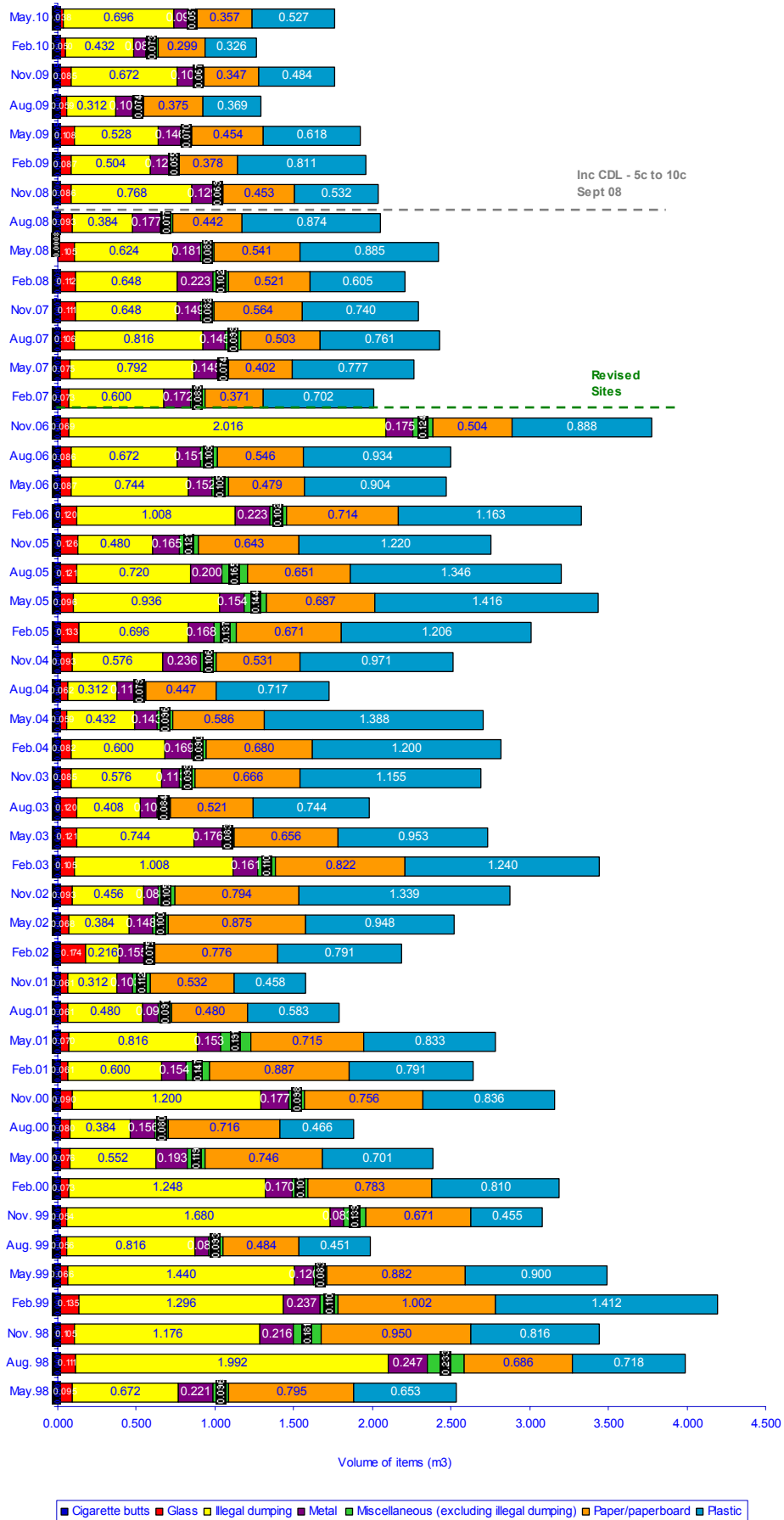
Volume of Litter by Site Type



Proportion of Litter Volume in Total Litter Stream by Site Type

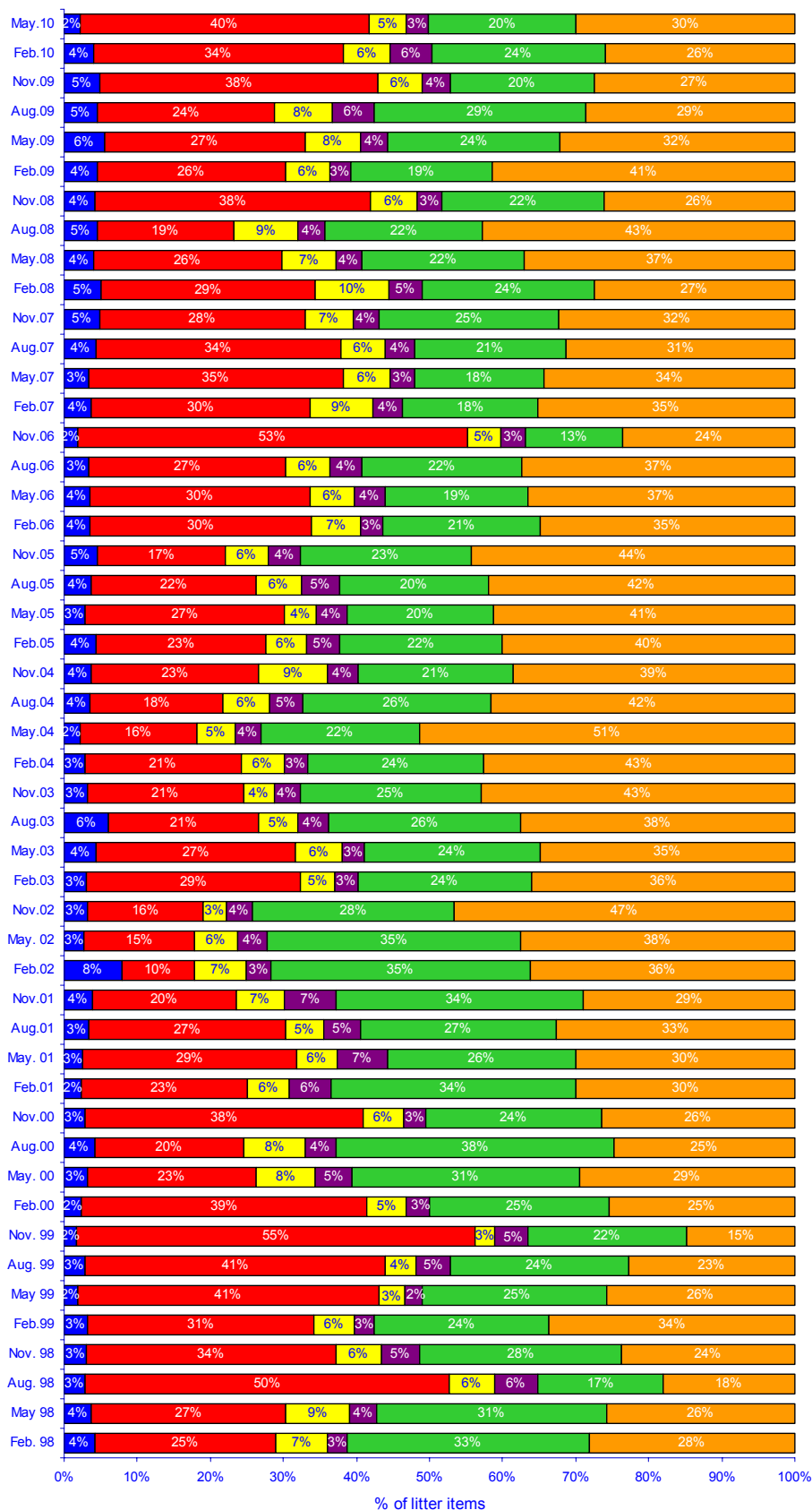


Volume of Litter Items by Material Type



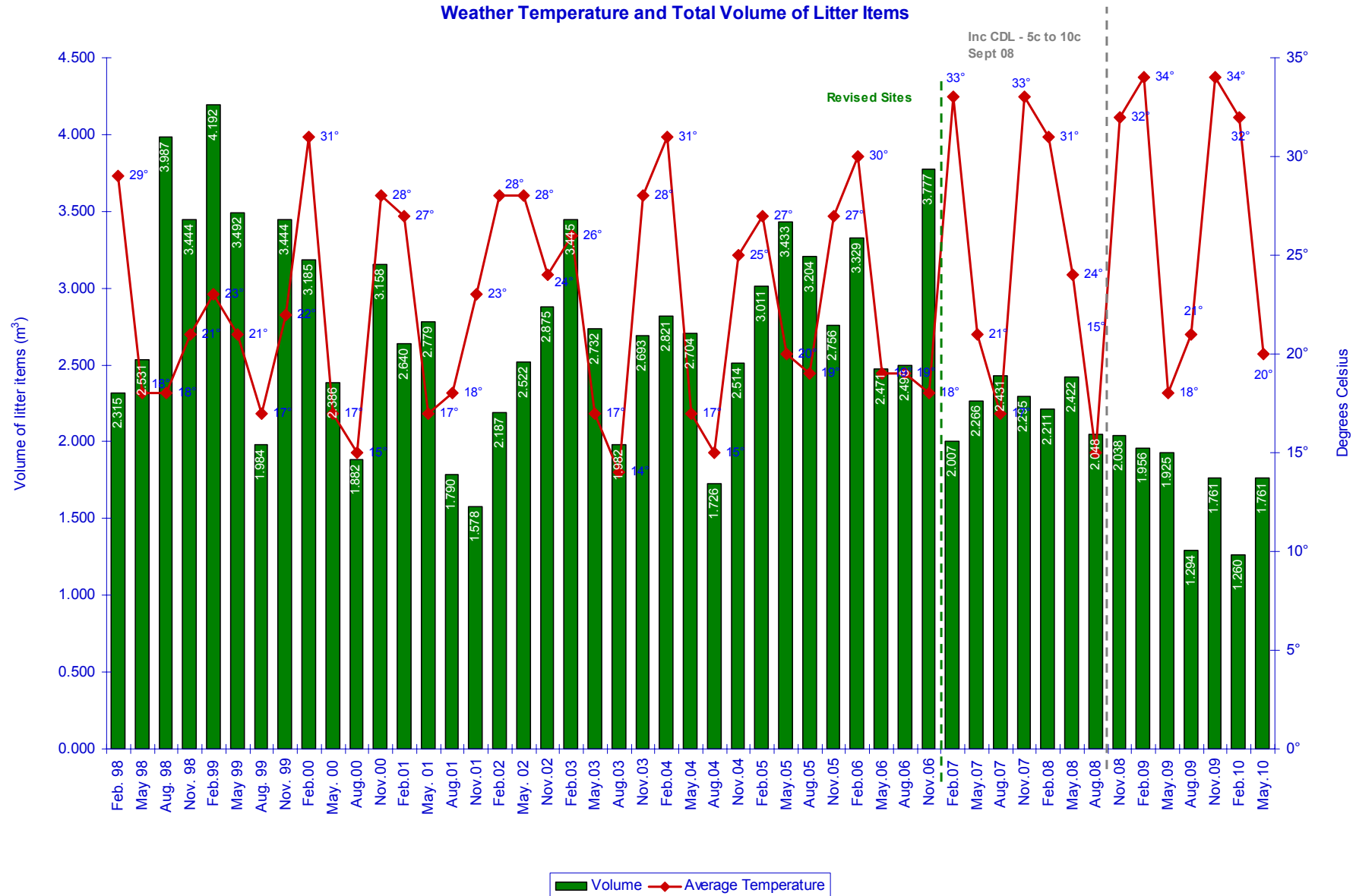
Proportion of Total Litter Volume by Material Type

- Please note that cigarette butts are not included as the volumes of such are consistently negligible -

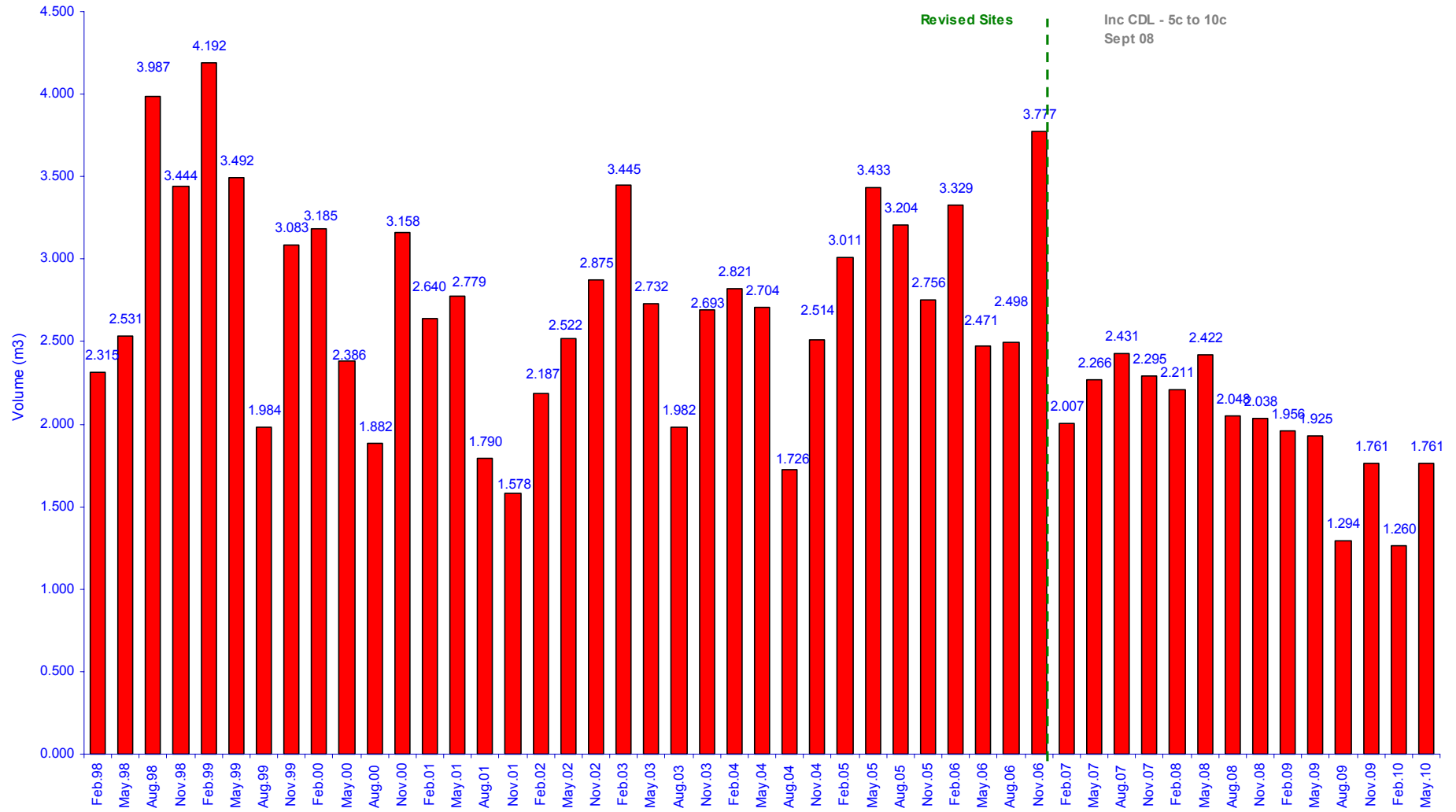


■ Glass ■ Illegal dumping ■ Metal ■ Miscellaneous (excluding illegal dumping) ■ Paper/paperboard ■ Plastic

Weather Temperature and Total Volume of Litter Items



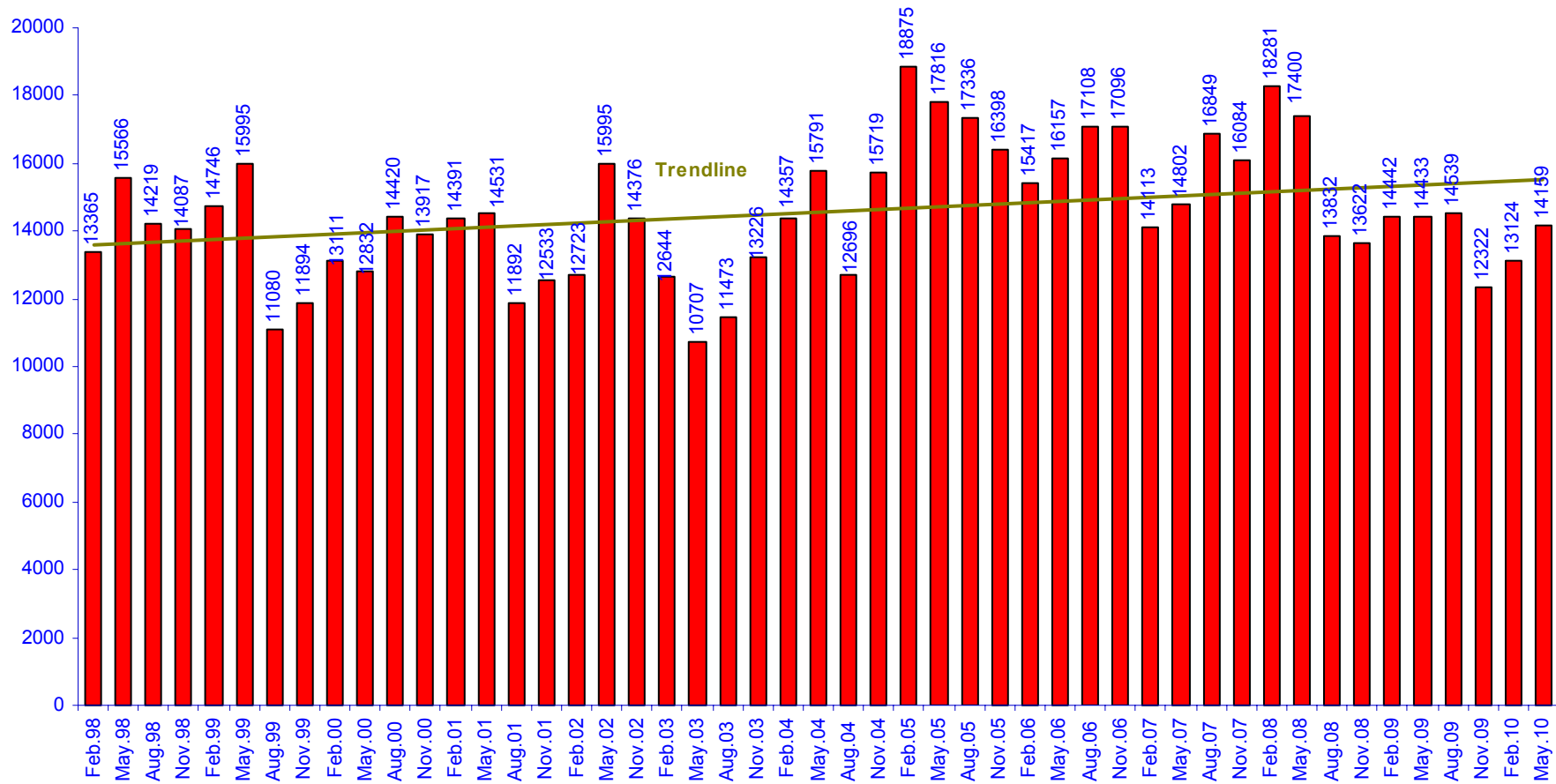
Total Volume (Cubic Metres) of Litter



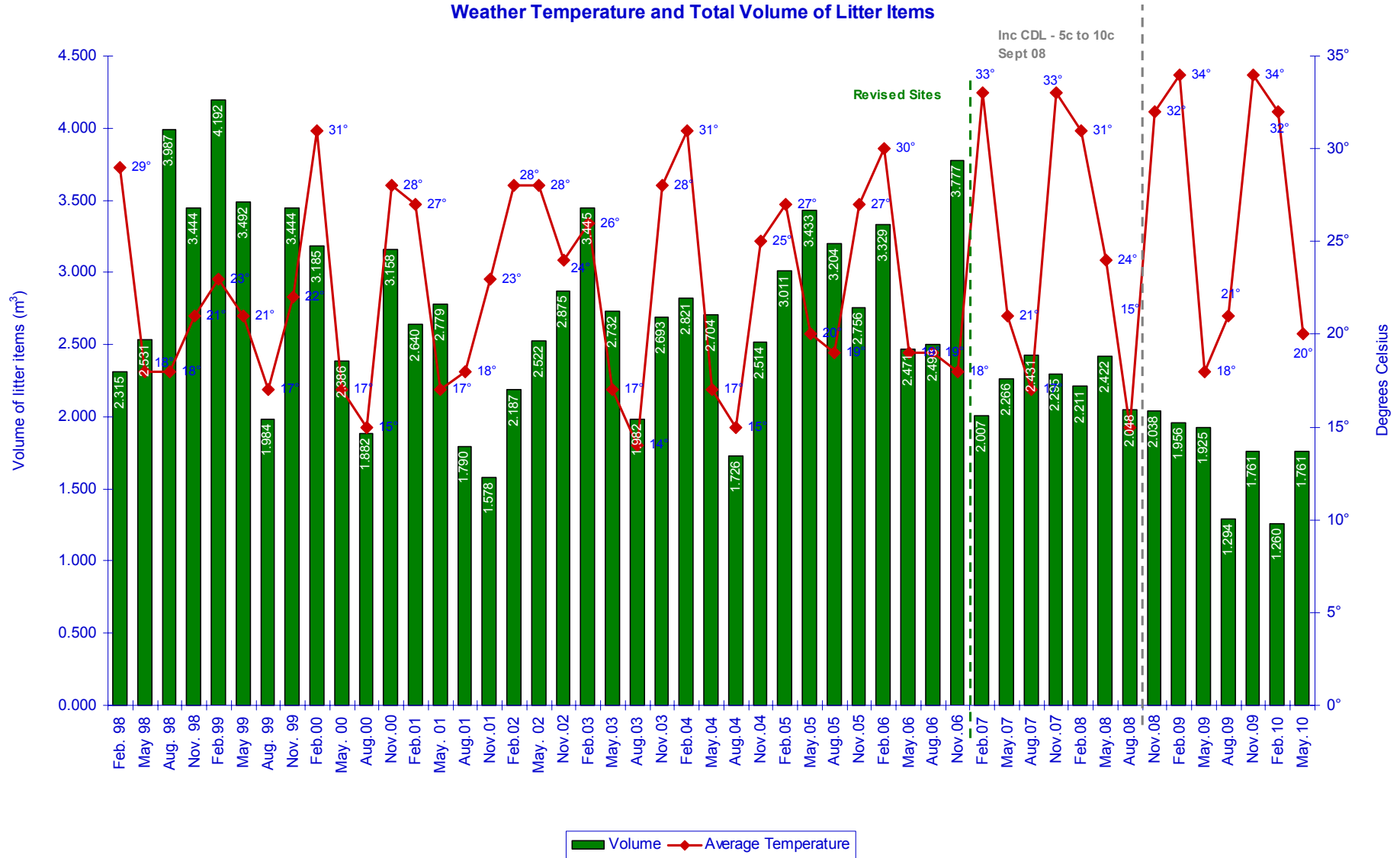
# *Weighted Tracking Graphs*

## *- Items*

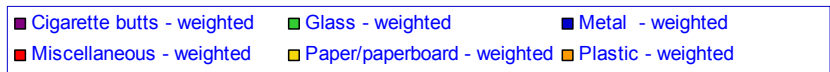
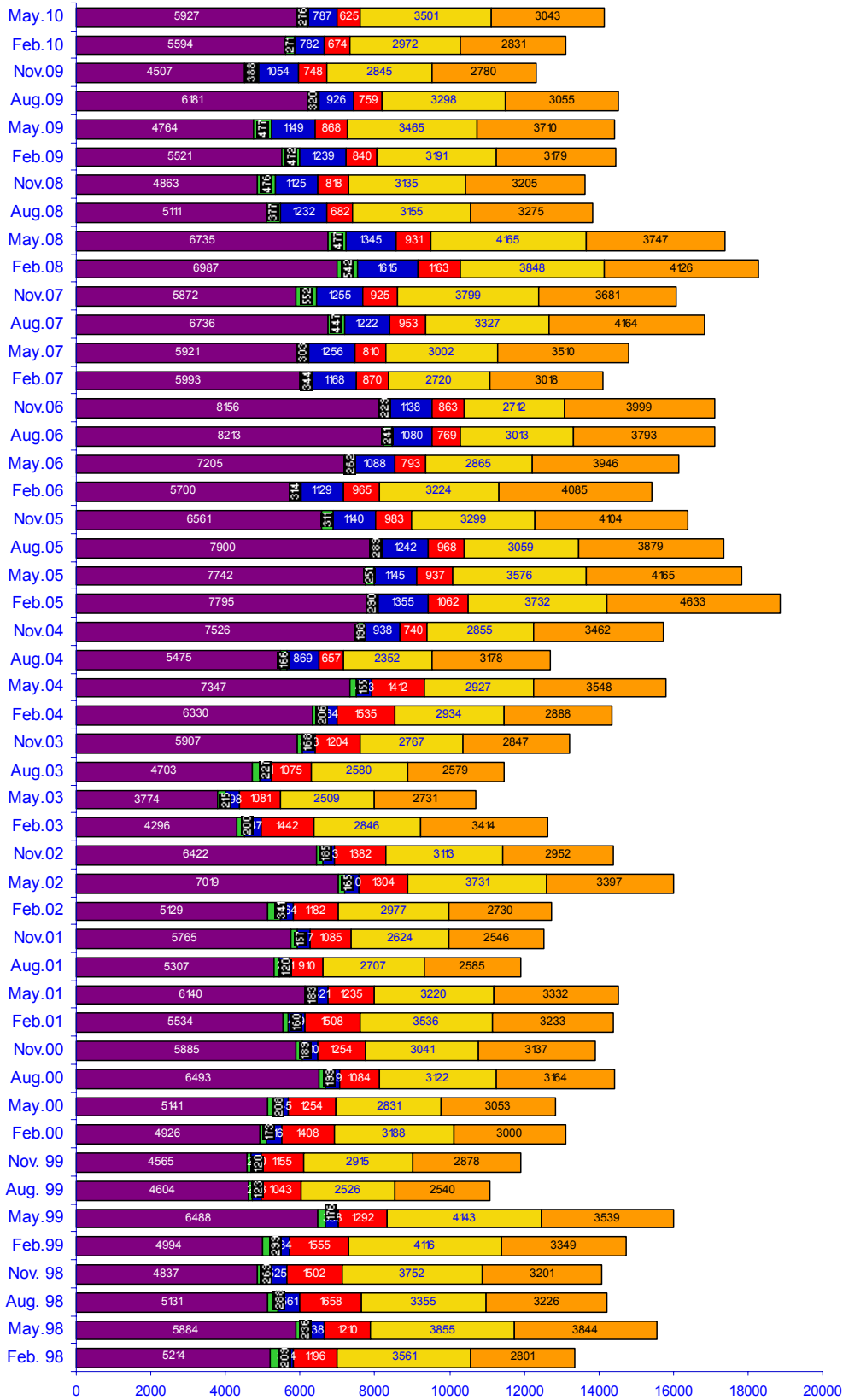
### Total Litter - Number of Items - Weighted



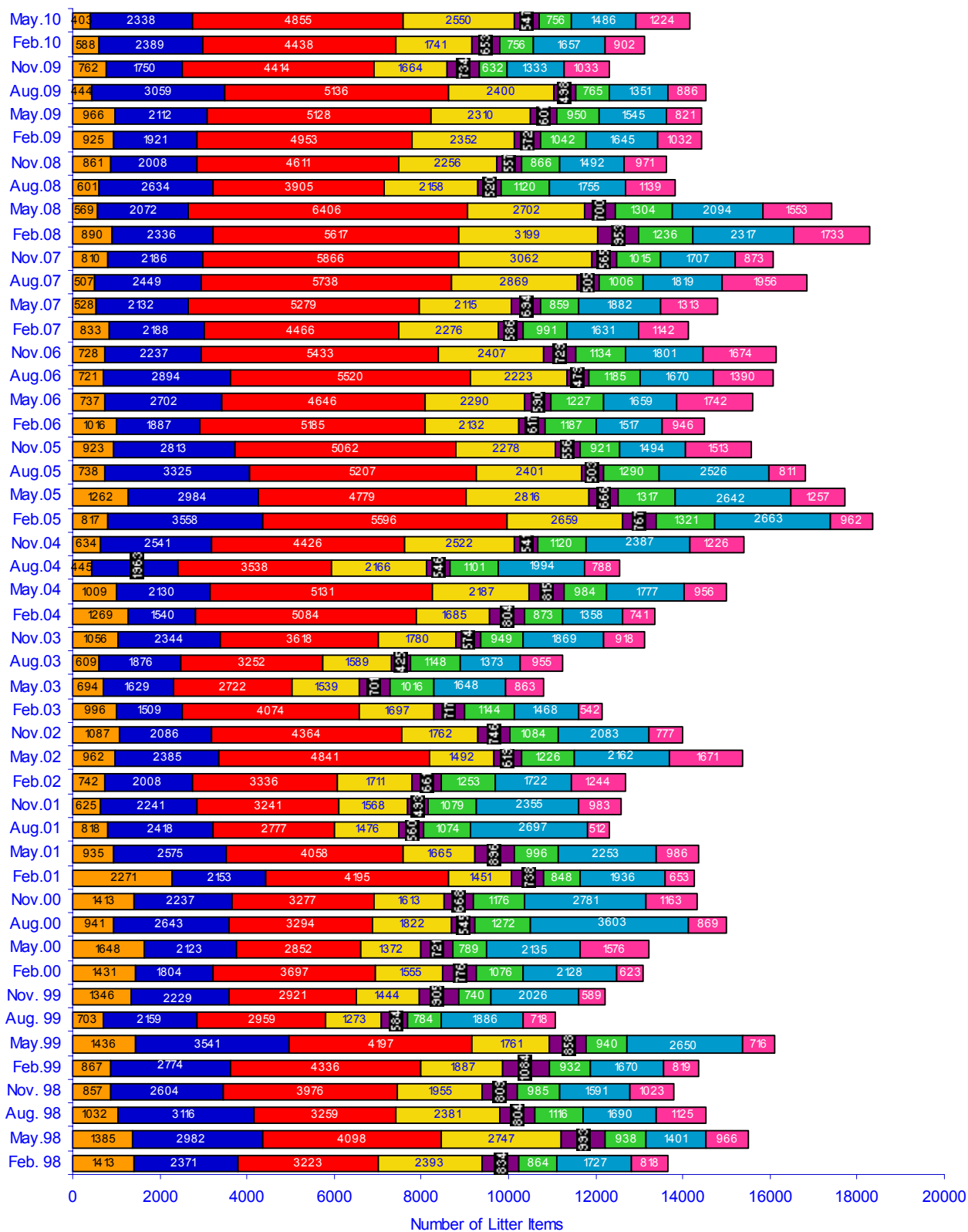
Weather Temperature and Total Volume of Litter Items



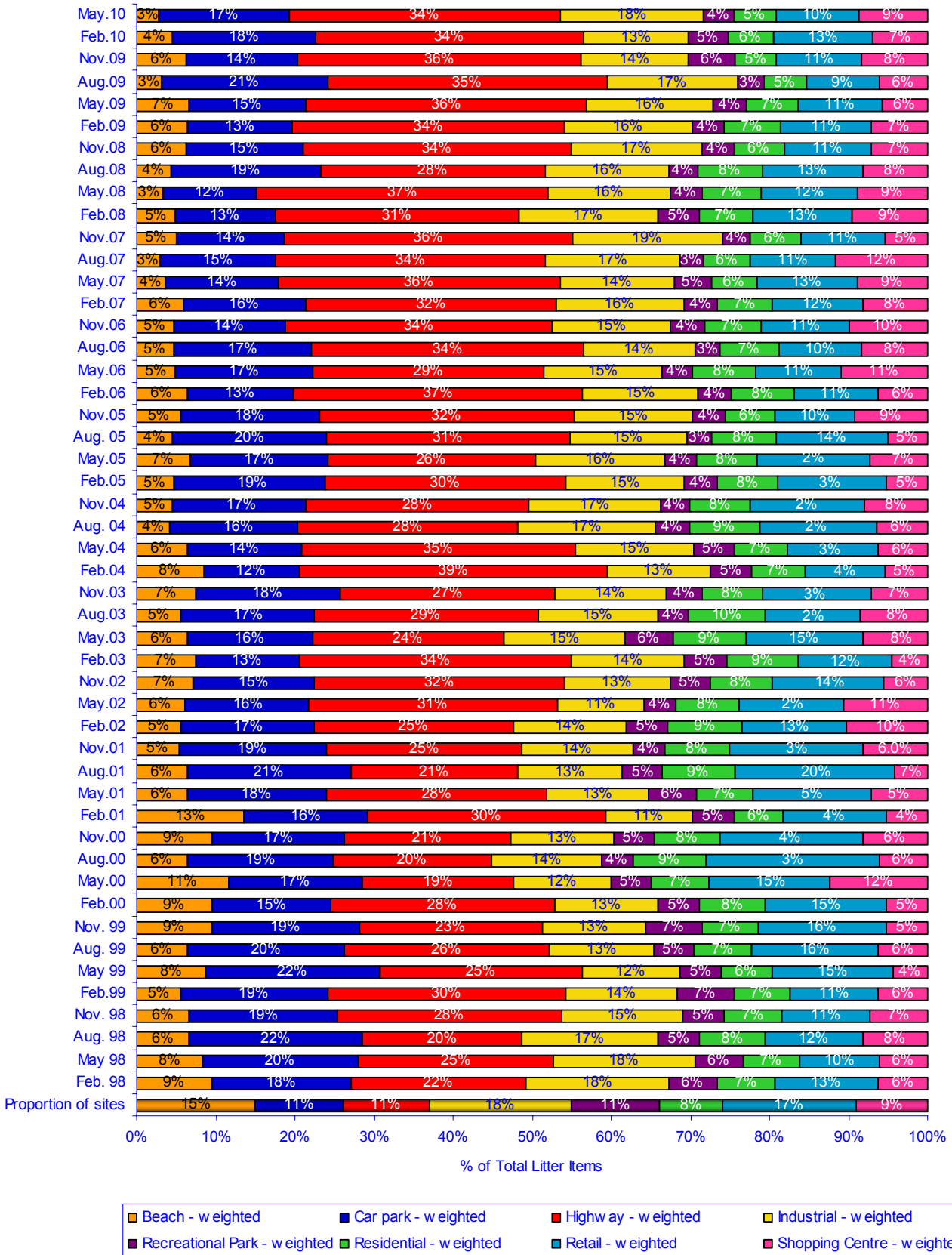
### Number of Litter Items by Material Type - Weighted

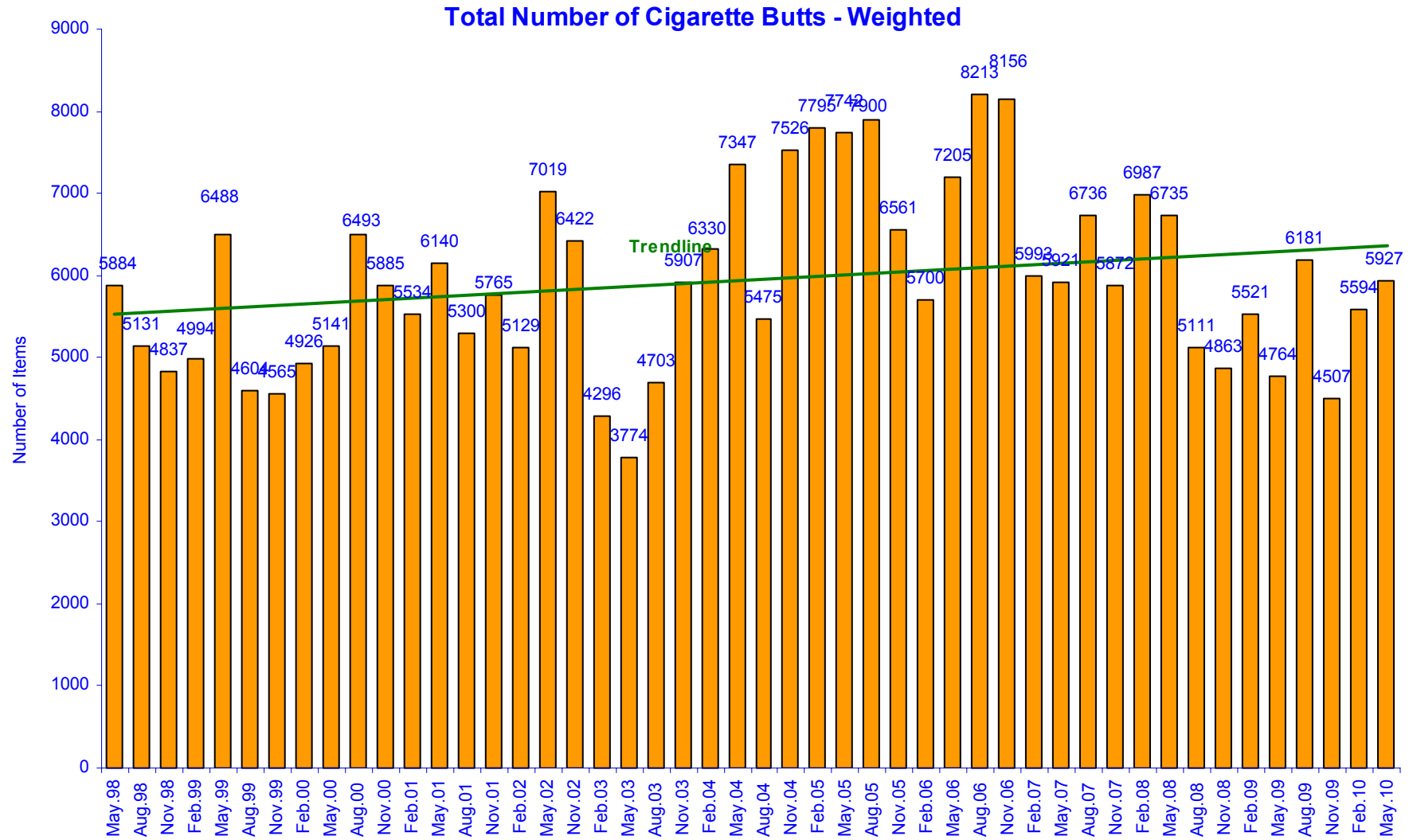


### Number of Litter Items by Site Type - Weighted

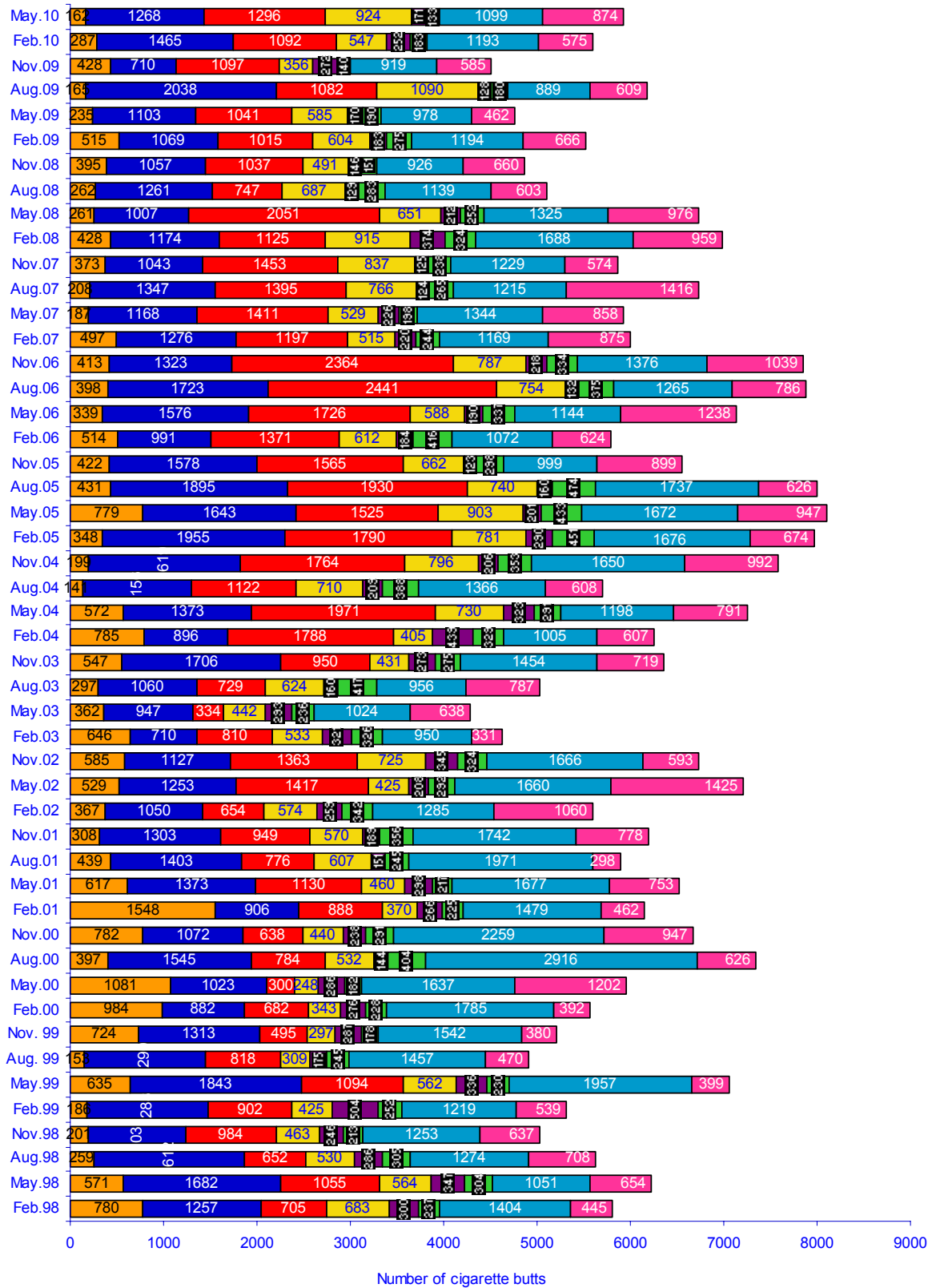


### Proportion of Total Litter by Site Type - Weighted

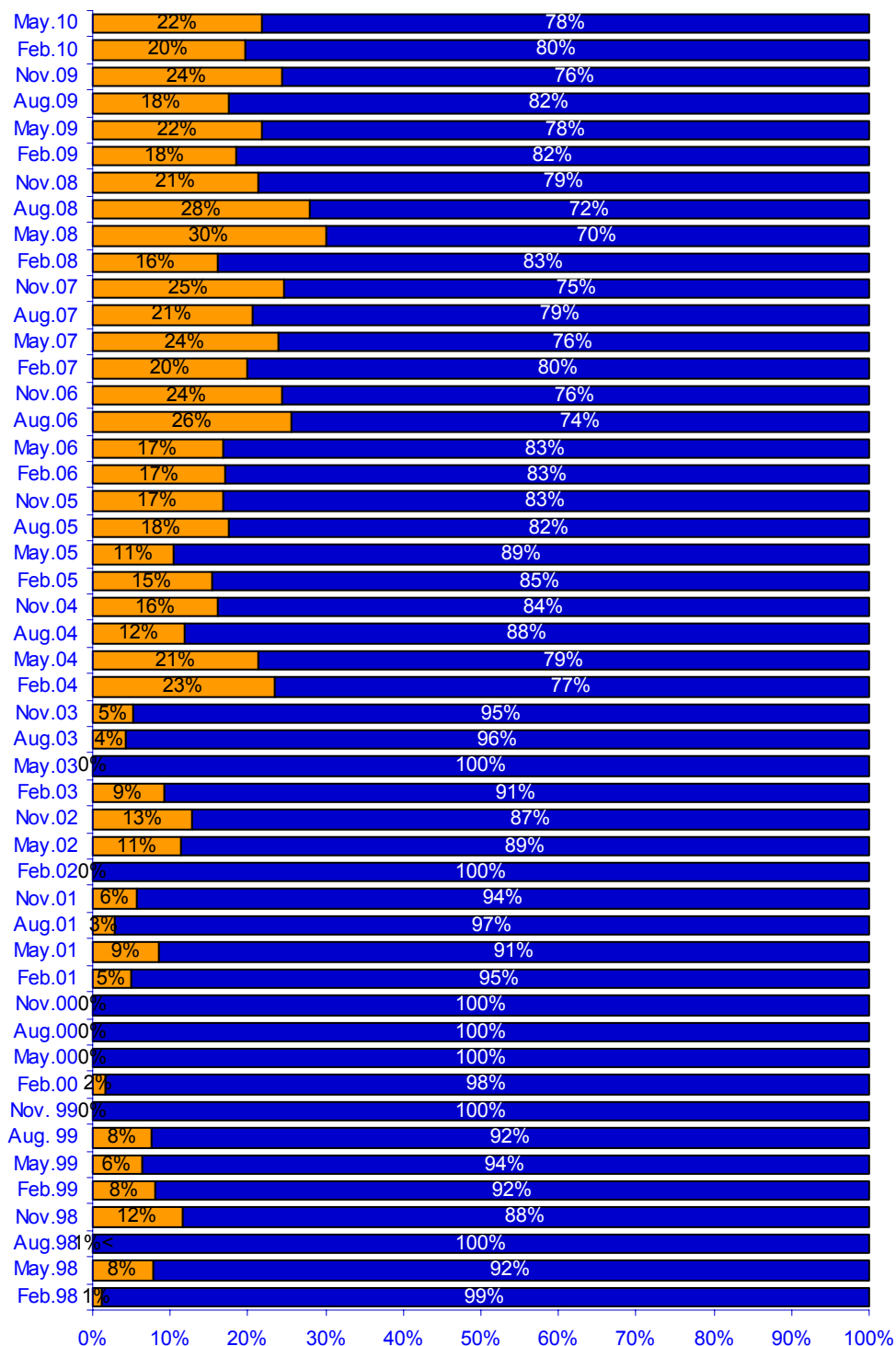




### Number of Cigarette Butts by Site Type - Weighted



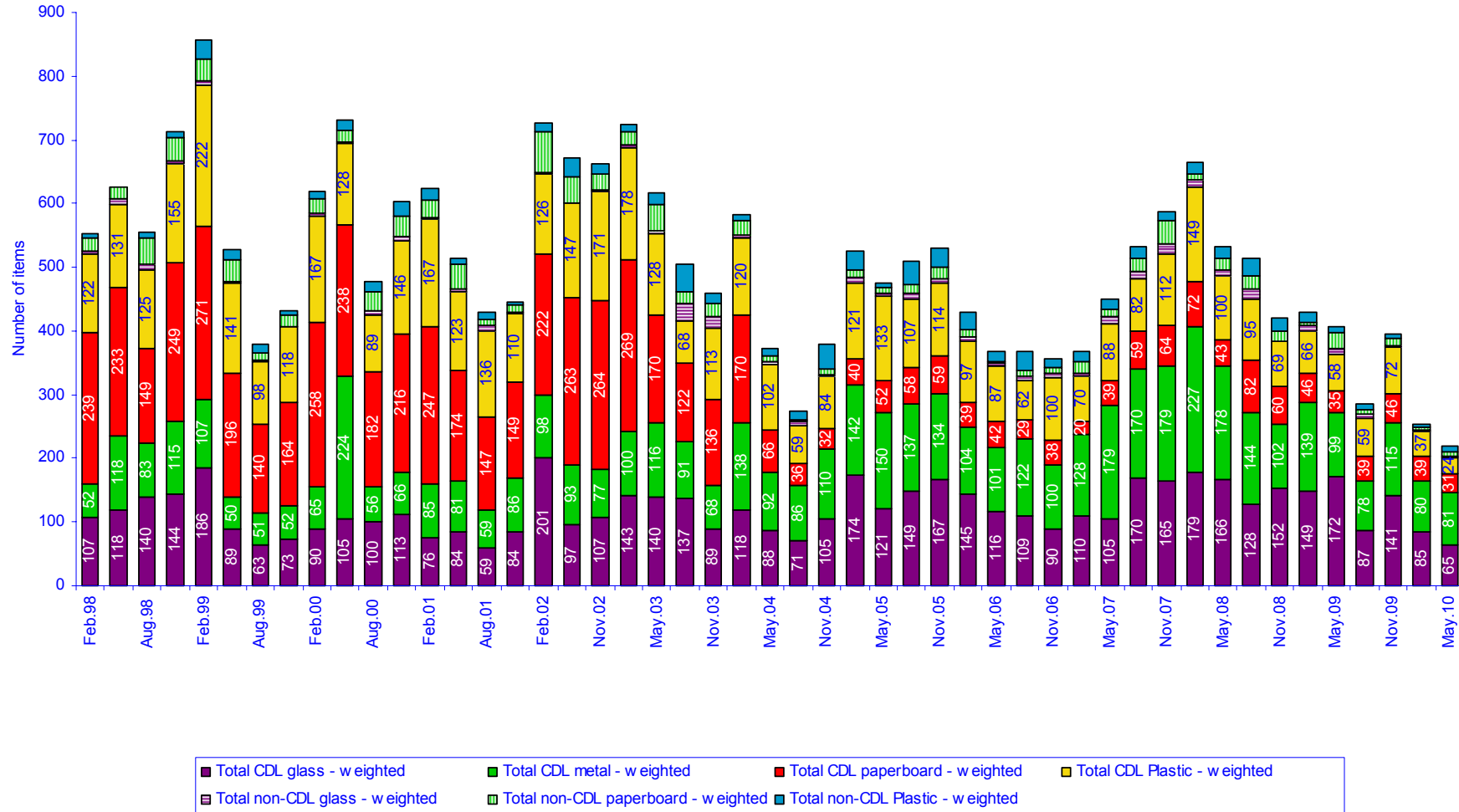
**Proportion of Total Cigarette Butt Litter at Highway sites & Other sites - Weighted**



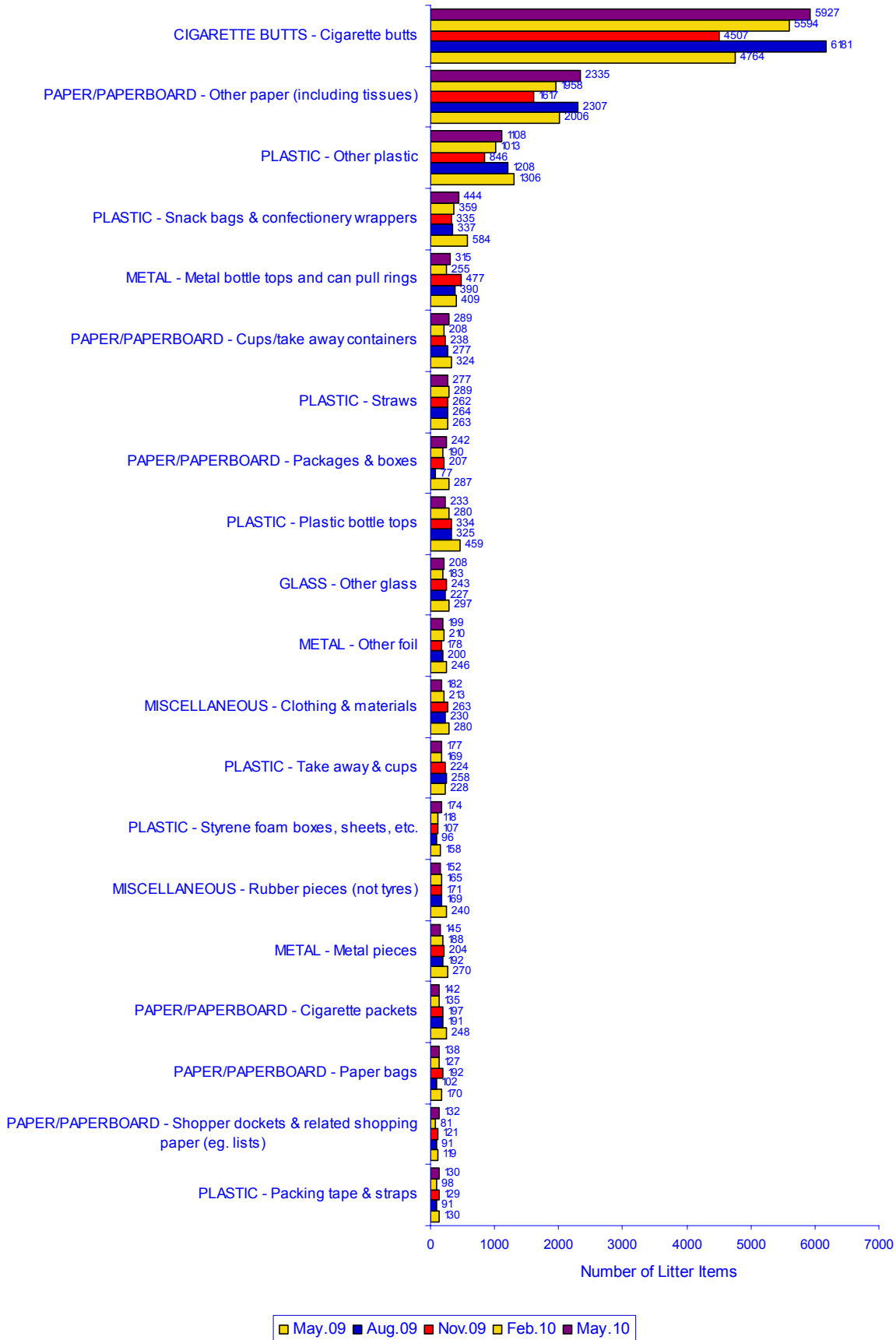
% of total cigarette butt litter

■ Highway sites - weighted ■ Other sites - weighted

CDL and Non-CDL Beverage Items Within Material Categories - Weighted

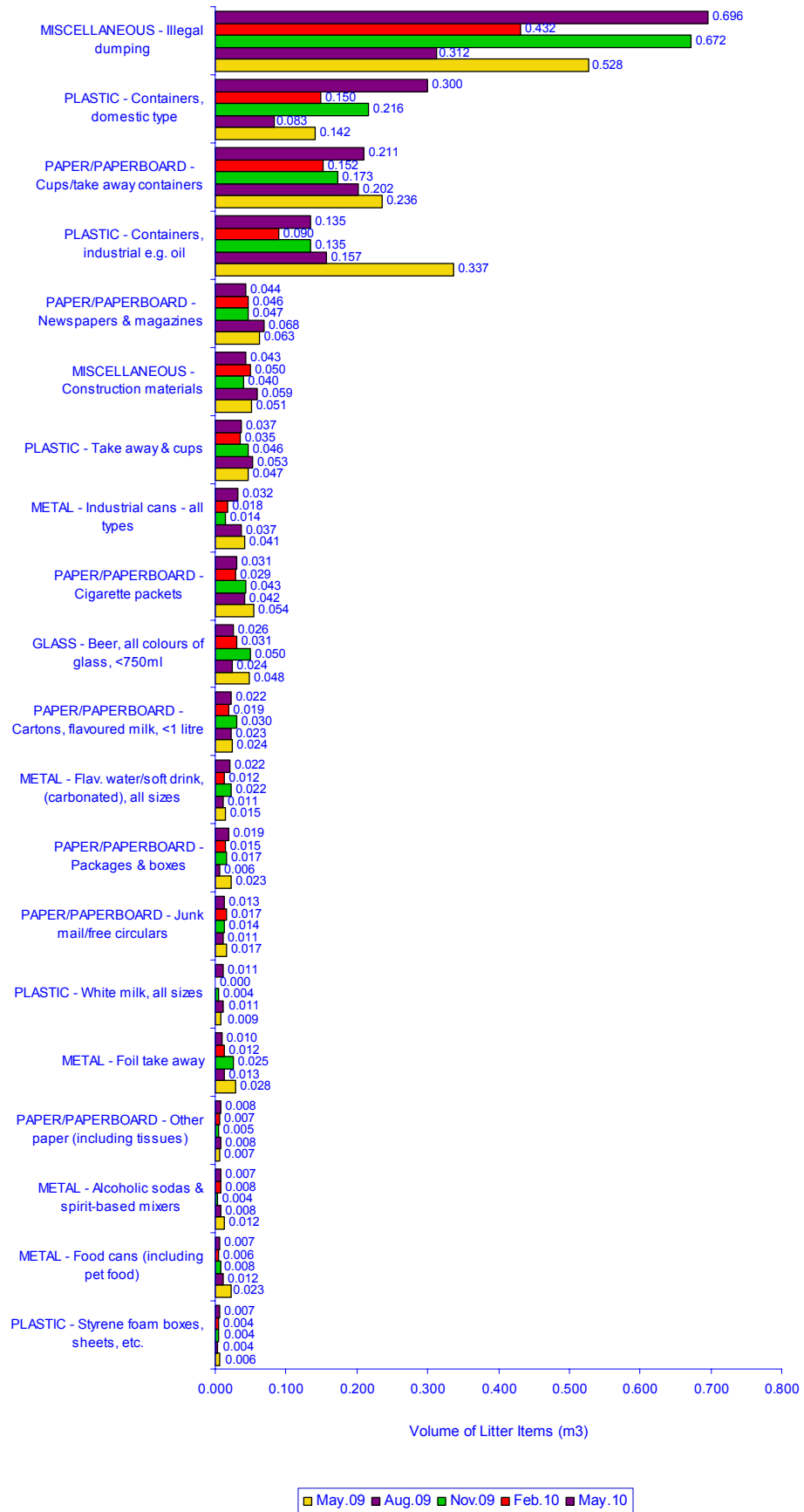


### Top 20 Litter Items - Highest Counts - Weighted

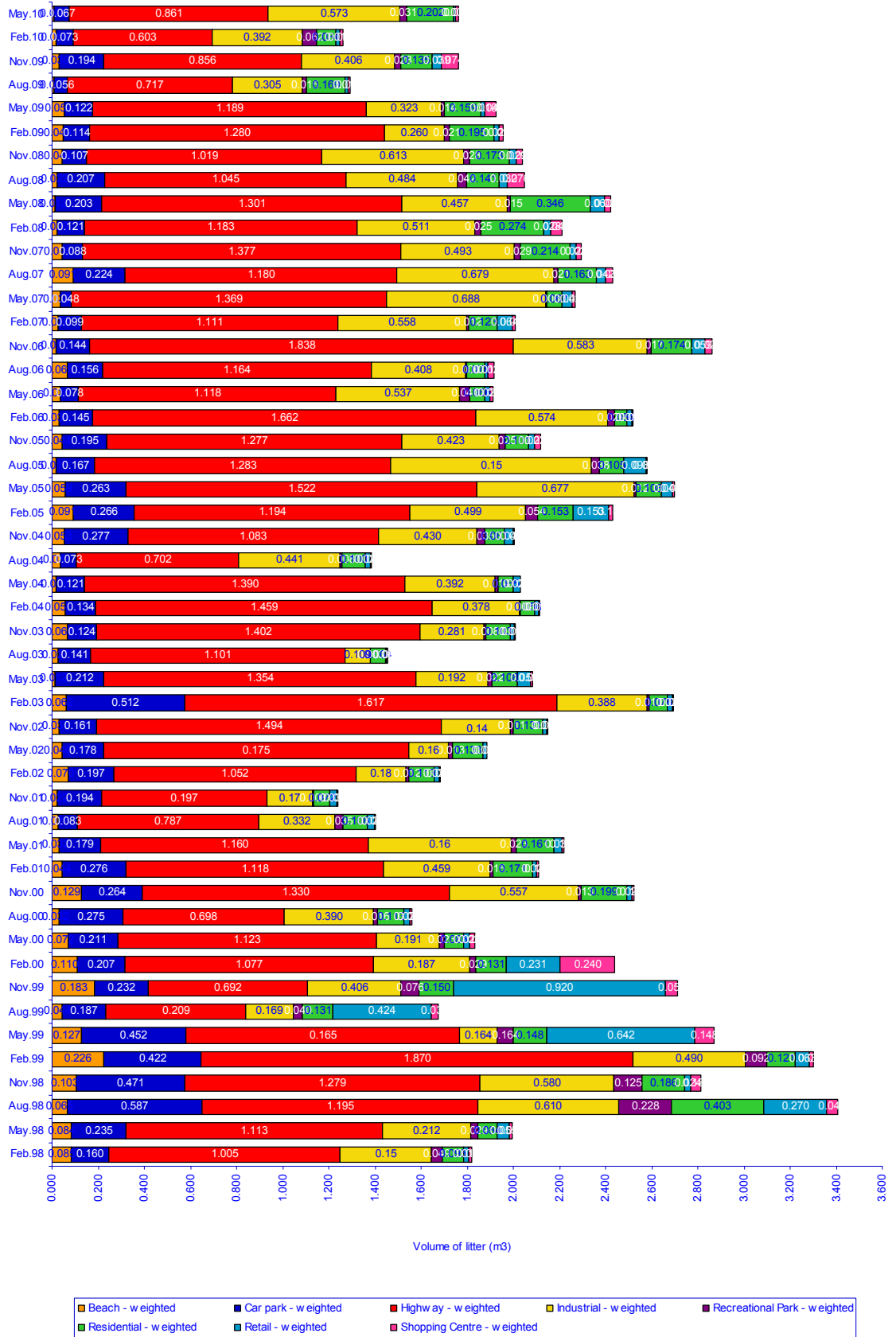


# *Weighted Tracking Graphs* *- Volumes*

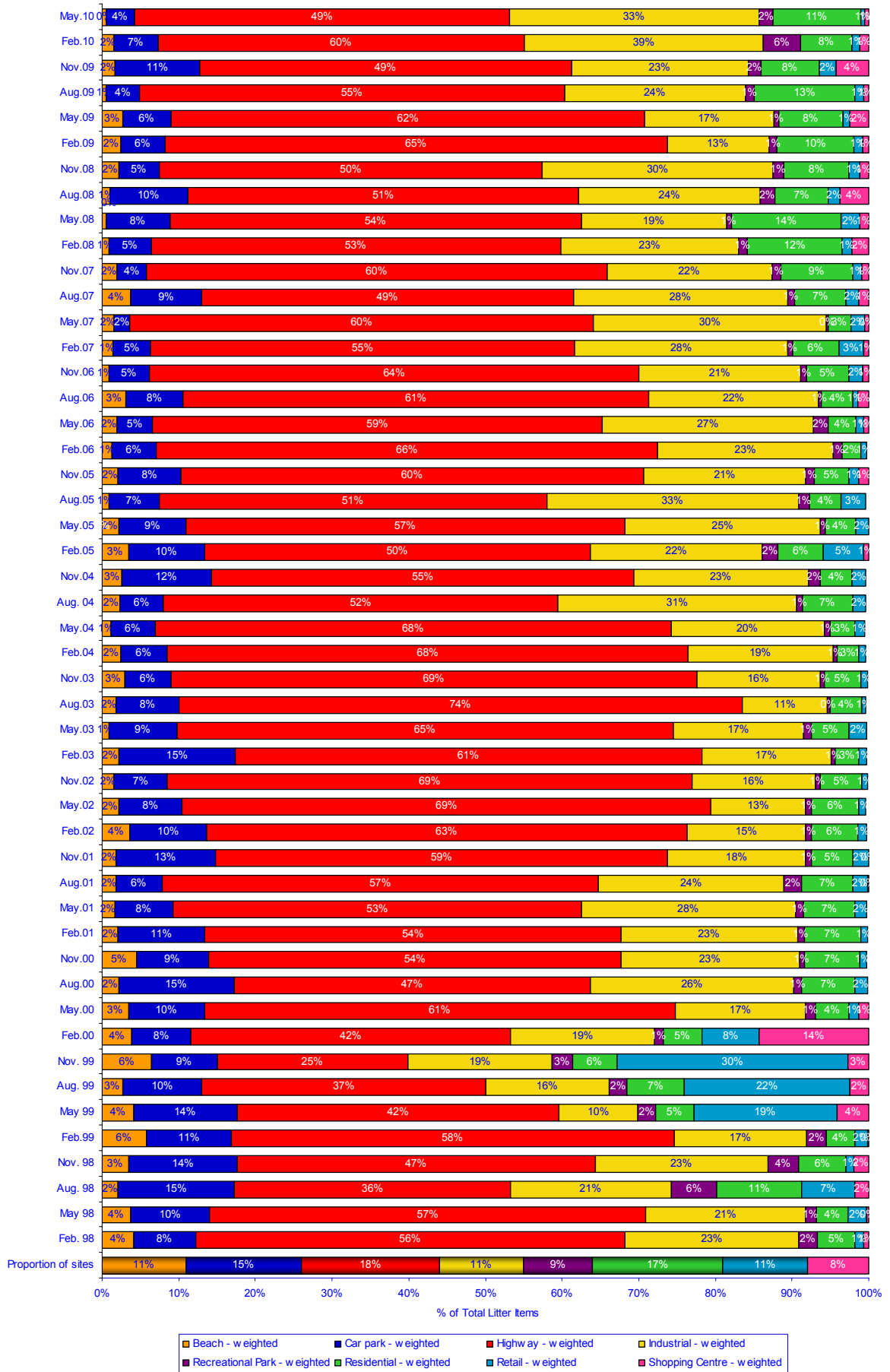
### Top 20 Litter Items by Volume - Weighted



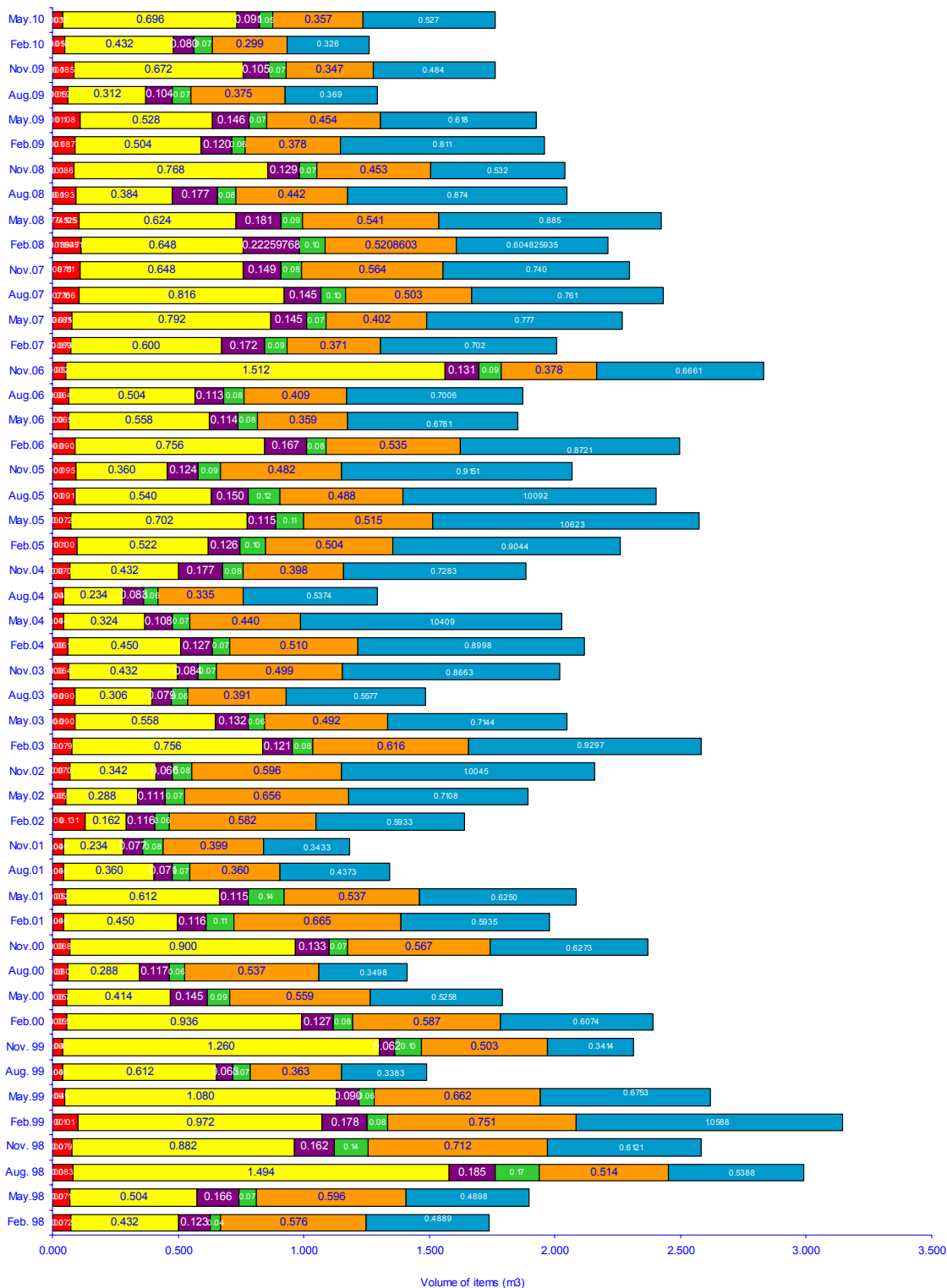
### Volume of Litter by Site Type - Weighted



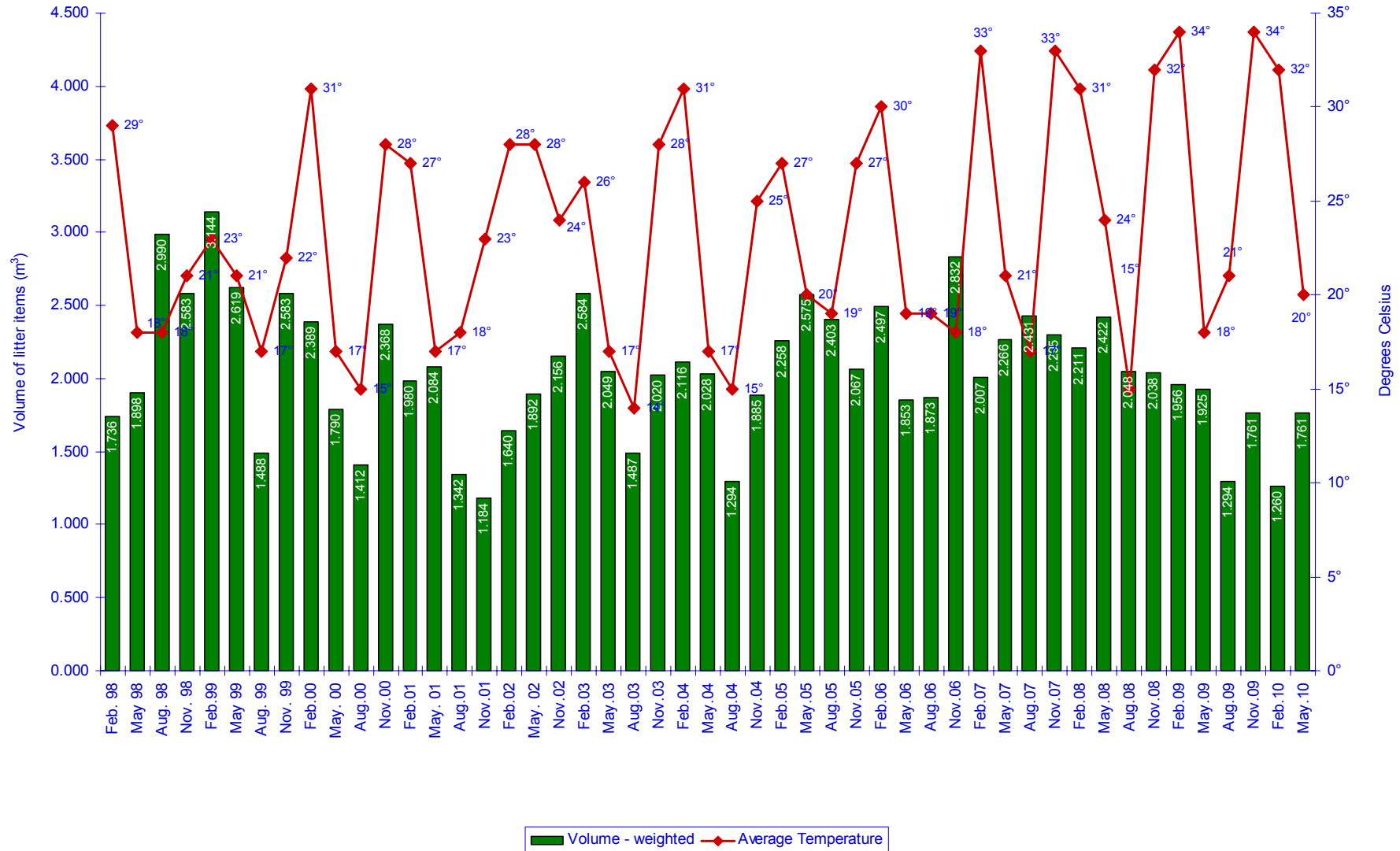
### Proportion of Litter Volume in Total Litter Stream by Site Type - Weighted



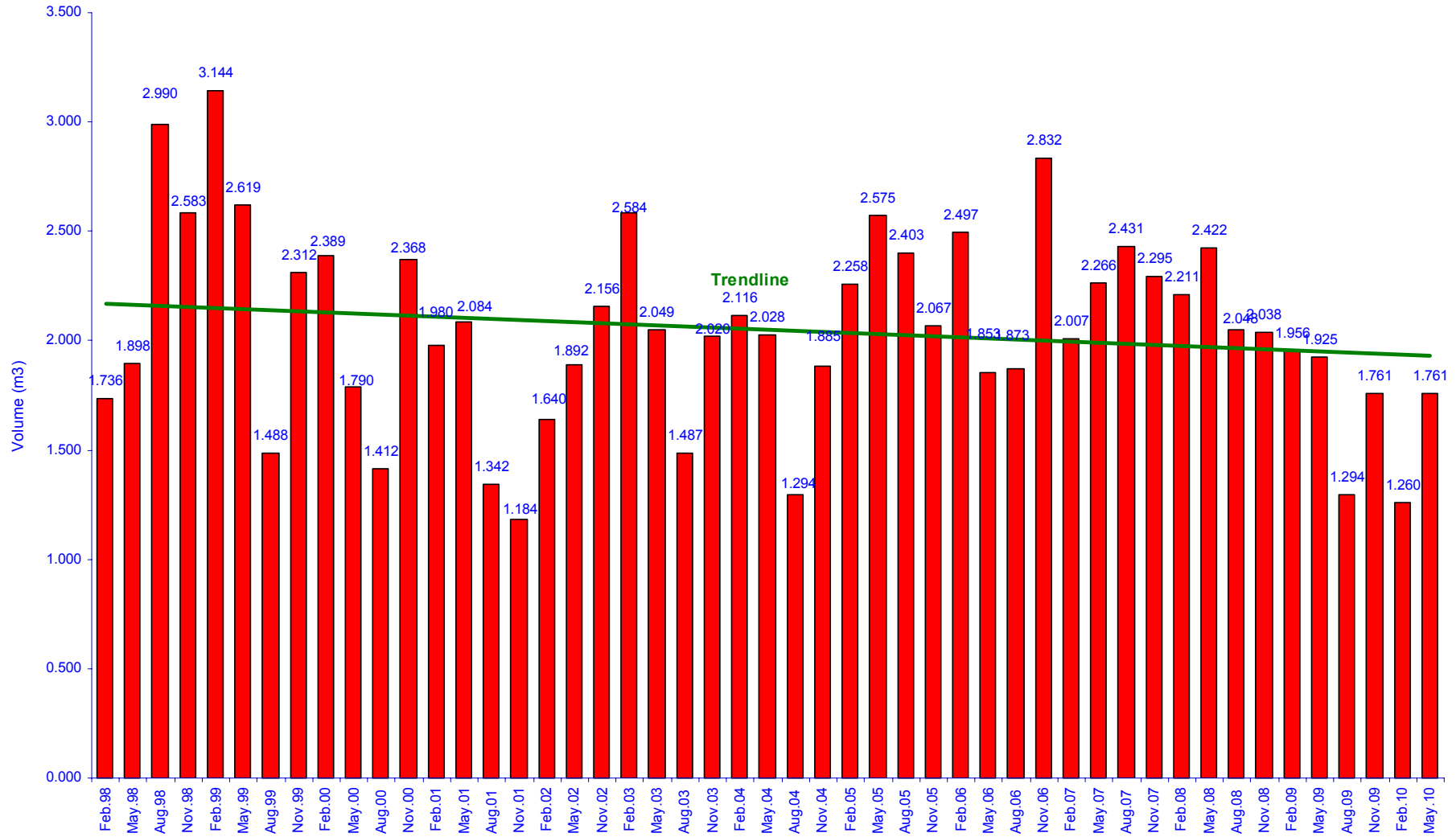
### Volume of Litter Items by Material Type - Weighted



Weather Temperature and Total Volume of Litter Items - Weighted



Total Volume (Cubic Metres) of Litter - Weighted



***Appendix 2:  
Data Collection Form***

# KESAB - LITTER COUNT COVER SHEET

(REF: 7239)

**SITE CODE:**

PLEASE ENSURE THAT A COPY OF THIS COVER SHEET IS FILLED OUT AND ATTACHED TO THE COMPLETED LITTER COUNT FORM FOR EVERY SITE.

Date of count: \_\_\_ / \_\_\_ / \_\_\_

Site description: \_\_\_\_\_

Site responsible person: \_\_\_\_\_

Wet? (Y/N)

Windy? (Y/N)

Temp? °C

## Conditions: (Circle appropriate numbers)

1. Area appeared to be cleaned before count
2. Deliberate dumping of rubbish
3. Area was mowed before count causing proliferation
4. Very recent storm/flood damage litter build-up
5. Very recent or current high winds causing build-up
6. Recent public event held in area – **specify:**
7. Uncovered load spilled in area causing litter

## Please record number and type of bins in site area

No. of litter bins:

No. of butt bins:

No. and type of other bins: \_\_\_\_\_

SITE CODE:		SITE RESPONSIBLE PERSON:			DATE:						
Item Type		Brand	Work Area	Total	Item Type		Brand	Work Area	Total		
GLASS	Ga	Plain water (carbonated or non-carb.), 1 litre+	NONE		METAL	Ma	Beer, aluminium, all types, all sizes				
	Gb	Plain water (carbonated or non-carb.), <1 litre	NONE			Mb	Alcoholic sodas & spirit-based mixers	NONE			
	Gc	Flavoured water/soft drink (carbonated) 1 litre+	NONE			Mc	Cider/fruit based etc.	NONE			
	Gd	Flavoured water/soft drink (carbonated) <1 litre	NONE			Md	Water, carbonated & flavoured/soft drink	NONE			
	Ge	Flav. water / fruit juice drink/ sports drink, (non carb), 1 litre+	NONE			Me	Water, non-carbonated & flavoured, all sizes	NONE			
	Gf	Flav. water / fruit juice drink/ sports drink, (non carb), <1 litre	NONE			Mf	Food cans (including pet food)	NONE			
	Gg	Fruit juice, 1 litre or more	NONE			Mg	Industrial cans - all types	NONE			
	Gh	Fruit juice, < 1 litre	NONE			Mh	Aerosols - pressure packs	NONE			
	Gi	Wine cooler, all sizes	NONE			Mi	Metal bottle tops and can pull rings	NONE			
	Gj	Alcoholic sodas / spirit-based mixers, all sizes	NONE			Mj	Metal pieces	NONE			
	Gk	Cider/fruit based etc.	NONE			Mk	Foil take away	NONE			
	Gl	Wine & spirit, all sizes	NONE			Ml	Other foil	NONE			
	Gm	Beer, 750ml or more, all colours of glass	NONE			Xa	Tyres & pieces	NONE			
	Gn	Beer, < 750ml, all colours of glass	NONE			Xb	Clothing & materials	NONE			
	Go	Other glass	NONE			Xc	Illegal dumping	NONE			
	CIGARETTE BUTTS						MISCELLANEOUS	Xd	Syringes - Do Not Touch	NONE	
						Xe		Ice cream sticks	NONE		
						Xf		Rubber pieces (not tyres)	NONE		
						Xg		Condoms	NONE		
						Xh		Construction materials	NONE		
				Xi	Disposable nappies	NONE					
				Xj	OTHER MSC - (Please specify item types and brands below)						

PAPER / PAPERBOARD					PLASTIC				
Item Type	Brand	Work Area	Total	Item Type	Brand	Work Area	Total		
Ka Packages & boxes	NONE			Pf Plain water (carbonated or non-carb) 1 litre+	NONE				
Kb Cigarette packets	NONE			Pg Plain water (carbonated or non-carb) <1 litre	NONE				
Kc Cartons, milk, plain (white), all sizes	NONE			Ph Flavoured water/soft drink (carbonated) 1 litre+	NONE				
Kd Cartons, flavoured milk 1 litre or more	NONE			Pi Flavoured water/soft drink (carbonated) <1 litre	NONE				
Ke Cartons, flavoured milk < 1 litre	NONE			Pj Flavoured water/fruit juice drinks, sports drinks etc. (non-carb) 1 litre+	NONE				
Kf Cartons, flav. water / fruit juice drink/ sports drink, (non carb), 1 litre+	NONE			Pk Flavoured water/fruit juice drinks, sports drinks etc. (non-carb) <1 litre	NONE				
Kg Cartons, flav. water / fruit juice drink/ sports drink, (non carb), <1 litre	NONE			Pl Containers, industrial e.g. oil	NONE				
Kh Cartons, fruit juice, 1 litre or more	NONE			Pm Containers, domestic type	NONE				
Ki Cartons, fruit juice, < 1 litre	NONE			Pn Bags - light weight plastic shopping type carry bags	NONE				
Kj Newspapers & magazines	NONE			Po Bags - heavier glossy typically branded carry bags	NONE				
Kk Junk mail / free circulars	NONE			Pp Sacks - sheeting - other bags	NONE				
Kl Cup/take away containers	NONE			Pq Wine cask bladders	NONE				
Km Tickets, e.g. bus, ATM, vending machine etc.	NONE			Pr Straws	NONE				
Kn Ice cream wrappers	NONE			Ps 6 ring can holders	NONE				
Ko Paper bags	NONE			Pt Snack bags and confectionery wrappers	NONE				
Kp Shopper dockets & related shopping paper (eg, lists)	NONE			Pu Styrene foam boxes, sheets, etc	NONE				
Kq Other paper (including tissues)	NONE			Pv Packing tape & straps	NONE				
Pa White milk, all sizes	NONE			Pw Take away & cups	NONE				
Pb Flavoured milk, 1 litre or more	NONE			Px Plastic bottle tops	NONE				
Pc Flavoured milk, < 1 litre	NONE			Py Bread bag tags	NONE				
Pd Fruit juice, 1 litre or more	NONE			Pz Lollipop sticks	NONE				
Pe Fruit juice < 1 litre	NONE			P1 Spoons/ cutlery	NONE				
	NONE			P2 Drink pouches	NONE				
	NONE			P3 All other plastic	NONE				