

15 May 2020

**INTERIM RESULTS OF FEBRUARY 2020 SWAP SURVEY OF QUEENSTOWN RTS**

Waste Not Consulting Ltd has been contracted by Waste Management NZ Ltd, on behalf of Queenstown Lakes District Council, to undertake composition surveys of solid waste disposed of at Council’s Frankton and Wanaka refuse transfer stations (RTS) and Victoria Flats Landfill. The research on waste composition will, when completed, comprise two separate four-day visual surveys of waste disposed of to landfill from the facilities. This report provides a summary of the results of the first of the two surveys, undertaken from 2-5 February 2020.

The dates and status of the two four-day visual surveys are shown in the table below. Note that the surveys have been scheduled to take into account seasonal variations in the composition of waste to landfill and include both weekdays and weekends to capture weekly variations in the waste streams. It is also noted that the February audit was undertaken during the early days of the COVID-19 pandemic. The pandemic resulted in reduced tourist visitor levels to New Zealand in general and Queenstown Lakes District in particular. Council reports that visitor numbers from China had started to decrease by the end January/early February. Consequently, the accommodation and hospitality sectors would have been generating lower quantities of waste materials during the February survey than previously.

Queenstown RTS surveys	Scheduled dates	Status
Visual RTS survey 1	2-5 February 2020	Completed and results prepared
Visual RTS survey 2	27-30 September 2020	Tentatively scheduled

A separate composition audit of kerbside waste was undertaken by Waste Not Consulting in December 2020. The results of that audit have been integrated into the results of the RTS survey.

Visual surveying of waste composition provides information on vehicle loads of waste entering a disposal facility in terms of composition of the waste load and the activity source of the waste (landscaping, residential, construction and demolition, etc.). The classification of waste composition is based on the 12 primary categories (e.g. paper, plastics etc.) recommended by Ministry for the Environment’s Solid Waste Analysis Protocol 2002 (SWAP). Further secondary categories, which identify recyclable and compostable materials, were chosen in conjunction with Council.

While each vehicle was being unloaded, the surveyor assessed the relative weight of each constituent present in the load on the basis of volume and density. Absolute weights were not estimated; rather, the proportion of weight represented by each material was estimated. This data was recorded as a proportion, by weight, for each constituent present in the load.

The data from the survey was then matched with weighbridge records for the survey period and the load weight for each vehicle determined. Using the survey data, weighbridge records for an eight-week period - 18 January - 13 March 2020 - were then analysed to provide information on waste flows over a longer period.

The tables on the next page show the activity sources of waste at Frankton RTS and Wanaka RTS. The results are compared with those from the SWAP visual survey conducted by Waste Not Consulting in August 2016, using the same methodology.

The Frankton RTS data does not include the minor quantity of tyres taken directly to Victoria Flats Landfill.

Activity sources of waste loads at Frankton RTS - 18 January - 13 March 2020	% of loads surveyed	% of total weight	Tonnes/week February 2020	Tonnes/week August 2016
<b>Construction &amp; demolition</b>	23%	29%	154 T/week	139 T/week
<b>Industrial/commercial/institutional</b>	33%	23%	125 T/week	47 T/week
<b>Landscaping &amp; earthworks</b>	11%	3%	16 T/week	4 T/week
<b>Residential</b>	20%	3%	15 T/week	14 T/week
<b>Subtotal - general waste</b>	<b>87%</b>	<b>58%</b>	<b>310 T/week</b>	<b>203 T/week</b>
<b>Kerbside waste (private &amp; Council)</b>	13%	42%	225 T/week	94 T/week
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>535 T/week</b>	<b>297 T/week</b>

Kerbside waste, which includes both Council and private collections from both domestic and commercial properties, was the largest activity source of waste disposed of at Frankton RTS, comprising 42% of waste, by weight. The tonnage of kerbside waste was significantly larger at Frankton RTS in 2020 than in 2016, primarily due to Wakatipu kerbside waste no longer being disposed of directly to Victoria Flats Landfill, as it was in 2016.

C&D waste was the second largest source of waste disposed of at Frankton RTS, comprising 29% of the total, or 154 tonnes per week. The weekly tonnages were similar between 2020 and 2016, although there may have been seasonal differences in construction activity, with there having possibly been less C&D activity in winter, when the 2016 survey was conducted. ICI waste was the third largest activity source of waste disposed of at Frankton RTS, comprising 23% of the total, or 125 tonnes per week. The tonnage of ICI waste was significantly larger in 2020 than in 2016. This is associated with an increase in economic activity in Wakatipu and, potentially, with seasonal variations in ICI waste generation. A portion of the increase in ICI waste at Frankton RTS is associated with a higher proportion of commercial waste from Wakatipu being disposed of directly to Victoria Flats Landfill in 2016 than in 2020.

Activity sources of waste loads at Wanaka RTS - 18 January - 13 March 2020	% of loads surveyed	% of total weight	Tonnes/week February 2020	Tonnes/week August 2016
<b>Construction &amp; demolition</b>	26%	29%	58 T/week	57 T/week
<b>Industrial/commercial/institutional</b>	23%	36%	71 T/week	22 T/week
<b>Landscaping &amp; earthworks</b>	5%	1%	2 T/week	1 T/week
<b>Residential</b>	36%	5%	9 T/week	9 T/week
<b>Subtotal - general waste</b>	<b>91%</b>	<b>71%</b>	<b>140 T/week</b>	<b>90 T/week</b>
<b>Kerbside waste (Council only)</b>	9%	29%	57 T/week	45 T/week
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>198 T/week</b>	<b>134 T/week</b>

ICI waste was the largest activity source of waste disposed of at Wanaka RTS, comprising 36% of the total weight, or 71 tonnes per week. The tonnage of ICI waste was significantly larger in 2020 than in 2016. This is associated with an increase in economic activity in Wanaka and, to a lesser extent, with seasonal variations in ICI waste generation.

C&D waste was the second largest source of waste disposed of at Wanaka RTS, comprising 29% of the total weight, or 58 tonnes per week. The weekly tonnages were virtually identical in 2020 and 2016, although there may have been seasonal differences in construction activity, with potentially less C&D activity in winter, when the 2016 survey was conducted. Council's kerbside waste

collection was the third largest activity source of waste disposed of at Wanaka RTS, comprising 29% of all waste. The tonnage of kerbside waste was 27% higher in 2020 than in 2016.

The composition of waste to landfill from Frankton RTS is presented in the table below. The composition is shown for both general waste, which excludes kerbside waste, and overall waste, which includes kerbside waste.

Waste to landfill from <b>Frankton RTS</b> General and overall waste streams 2-5 February 2020		General waste ( <u>excludes</u> kerbside waste)		Overall waste ( <u>includes</u> kerbside waste)	
		% of total	Tonnes/week	% of total	Tonnes/week
<b>Paper</b>	Recyclable	3.8%	12 T/week	4.4%	24 T/week
	Cardboard	7.6%	24 T/week	4.7%	25 T/week
	Non-recyclable	1.0%	3 T/week	1.4%	7 T/week
	<b>Subtotal</b>	<b>12.4%</b>	<b>38 T/week</b>	<b>10.5%</b>	<b>56 T/week</b>
<b>Plastics</b>	Recyclable	1.7%	5 T/week	1.7%	9 T/week
	Non-recyclable	10.5%	33 T/week	9.8%	53 T/week
	<b>Subtotal</b>	<b>12.2%</b>	<b>38 T/week</b>	<b>11.5%</b>	<b>62 T/week</b>
<b>Organics</b>	Kitchen waste	2.4%	7 T/week	15.6%	84 T/week
	Compostable greenwaste	3.9%	12 T/week	9.2%	49 T/week
	Non-compostable greenwaste	3.6%	11 T/week	2.9%	15 T/week
	Organics other	0.5%	2 T/week	1.2%	7 T/week
	<b>Subtotal</b>	<b>10.5%</b>	<b>32 T/week</b>	<b>28.9%</b>	<b>155 T/week</b>
<b>Ferrous metals</b>	Primarily ferrous	1.7%	5 T/week	1.2%	6 T/week
	Steel other	1.3%	4 T/week	1.4%	7 T/week
	<b>Subtotal</b>	<b>3.0%</b>	<b>9 T/week</b>	<b>2.5%</b>	<b>13 T/week</b>
<b>Non-ferrous metals</b>		<b>0.4%</b>	<b>1 T/week</b>	<b>0.7%</b>	<b>4 T/week</b>
<b>Glass</b>	Recyclable	0.5%	2 T/week	1.1%	6 T/week
	Glass other	0.9%	3 T/week	0.8%	4 T/week
	<b>Subtotal</b>	<b>1.4%</b>	<b>4 T/week</b>	<b>1.8%</b>	<b>10 T/week</b>
<b>Textiles</b>	Clothing/textiles	0.9%	3 T/week	1.7%	9 T/week
	Multimaterial/other	3.7%	12 T/week	3.1%	16 T/week
	<b>Subtotal</b>	<b>4.7%</b>	<b>14 T/week</b>	<b>4.7%</b>	<b>25 T/week</b>
<b>Sanitary paper</b>		<b>1.5%</b>	<b>5 T/week</b>	<b>4.0%</b>	<b>22 T/week</b>
<b>Rubble</b>	Cleanfill	4.0%	12 T/week	2.3%	12 T/week
	New plasterboard	7.1%	22 T/week	4.1%	22 T/week
	Other	6.6%	21 T/week	5.9%	32 T/week
	<b>Subtotal</b>	<b>17.7%</b>	<b>55 T/week</b>	<b>12.4%</b>	<b>66 T/week</b>
<b>Timber</b>	Reusable	2.4%	8 T/week	1.4%	8 T/week
	Unpainted & untreated	6.6%	21 T/week	3.8%	21 T/week
	Non-recoverable	25.7%	80 T/week	16.3%	87 T/week
	<b>Subtotal</b>	<b>34.8%</b>	<b>108 T/week</b>	<b>21.5%</b>	<b>115 T/week</b>
<b>Rubber</b>		<b>0.9%</b>	<b>3 T/week</b>	<b>0.7%</b>	<b>4 T/week</b>
<b>Potentially hazardous</b>		<b>0.6%</b>	<b>2 T/week</b>	<b>0.8%</b>	<b>4 T/week</b>
<b>TOTAL</b>		<b>100.0%</b>	<b>310 T/week</b>	<b>100.0%</b>	<b>535 T/week</b>

The composition of waste to landfill from Wanaka RTS is presented in the table below. The composition is shown for both general waste, which excludes kerbside waste, and overall waste, which includes kerbside waste.

Waste to landfill from <u>Wanaka RTS</u> General and overall waste streams 2-5 February 2020		General waste ( <u>excludes</u> kerbside waste)		Overall waste ( <u>includes</u> kerbside waste)	
		% of total	Tonnes/week	% of total	Tonnes/week
<b>Paper</b>	Recyclable	3.4%	5 T/week	4.0%	8 T/week
	Cardboard	6.3%	9 T/week	4.6%	9 T/week
	Non-recyclable	0.6%	1 T/week	1.0%	2 T/week
	<b>Subtotal</b>	<b>10.2%</b>	<b>14 T/week</b>	<b>9.6%</b>	<b>19 T/week</b>
<b>Plastics</b>	Recyclable	0.7%	1 T/week	1.0%	2 T/week
	Non-recyclable	10.1%	14 T/week	9.7%	19 T/week
	<b>Subtotal</b>	<b>10.7%</b>	<b>15 T/week</b>	<b>10.7%</b>	<b>21 T/week</b>
<b>Organics</b>	Kitchen waste	7.9%	11 T/week	15.4%	31 T/week
	Compostable greenwaste	2.4%	3 T/week	6.4%	13 T/week
	Non-compostable greenwaste	1.9%	3 T/week	1.9%	4 T/week
	Organics other	1.9%	3 T/week	2.0%	4 T/week
	<b>Subtotal</b>	<b>14.0%</b>	<b>20 T/week</b>	<b>25.7%</b>	<b>51 T/week</b>
<b>Ferrous metals</b>	Primarily ferrous	0.8%	1 T/week	0.7%	1 T/week
	Steel other	1.9%	3 T/week	1.8%	4 T/week
	<b>Subtotal</b>	<b>2.8%</b>	<b>4 T/week</b>	<b>2.5%</b>	<b>5 T/week</b>
<b>Non-ferrous metals</b>		<b>0.9%</b>	<b>1 T/week</b>	<b>1.0%</b>	<b>2 T/week</b>
<b>Glass</b>	Recyclable	0.9%	1 T/week	1.2%	2 T/week
	Glass other	1.0%	1 T/week	0.9%	2 T/week
	<b>Subtotal</b>	<b>1.9%</b>	<b>3 T/week</b>	<b>2.1%</b>	<b>4 T/week</b>
<b>Textiles</b>	Clothing/textiles	2.2%	3 T/week	2.4%	5 T/week
	Multimaterial/other	4.7%	7 T/week	3.9%	8 T/week
	<b>Subtotal</b>	<b>6.9%</b>	<b>10 T/week</b>	<b>6.3%</b>	<b>12 T/week</b>
<b>Sanitary paper</b>		<b>2.2%</b>	<b>3 T/week</b>	<b>3.8%</b>	<b>7 T/week</b>
<b>Rubble</b>	Cleanfill	1.0%	1 T/week	0.7%	1 T/week
	New plasterboard	3.8%	5 T/week	2.7%	5 T/week
	Other	10.2%	14 T/week	8.7%	17 T/week
	<b>Subtotal</b>	<b>15.0%</b>	<b>21 T/week</b>	<b>12.1%</b>	<b>24 T/week</b>
<b>Timber</b>	Reusable	6.4%	9 T/week	4.5%	9 T/week
	Unpainted & untreated	3.5%	5 T/week	2.5%	5 T/week
	Non-recoverable	22.4%	31 T/week	16.9%	33 T/week
	<b>Subtotal</b>	<b>32.3%</b>	<b>45 T/week</b>	<b>23.9%</b>	<b>47 T/week</b>
<b>Rubber</b>		<b>2.0%</b>	<b>3 T/week</b>	<b>1.5%</b>	<b>3 T/week</b>
<b>Potentially hazardous</b>		<b>1.0%</b>	<b>1 T/week</b>	<b>1.0%</b>	<b>2 T/week</b>
<b>TOTAL</b>		<b>100.0%</b>	<b>140 T/week</b>	<b>100.0%</b>	<b>198 T/week</b>

Of the 25 material classifications used in the visual survey, nine are currently either recycled or recovered in New Zealand. A further four materials are compostable, although two recovery of two of these is not common. There are currently diversion options available in Queenstown for ten of these 13 materials. Based on these 13 materials, the table below shows the proportion of the overall waste streams disposed of at each RTS that could potentially have been diverted from landfill disposal.

Overall waste to landfill from RTS Includes kerbside waste Diversion potential 2-5 February 2020	Frankton RTS		Wanaka RTS	
	% of total	Tonnes/week	% of total	Tonnes/week
<b>Recyclable and recoverable materials</b>				
Paper - Recyclable	4.4%	24 T/week	4.0%	8 T/week
Paper - Cardboard	4.7%	25 T/week	4.6%	9 T/week
Plastic - Recyclable	1.7%	9 T/week	1.0%	2 T/week
Ferrous metals	2.5%	13 T/week	2.5%	5 T/week
Non-ferrous metals	0.7%	4 T/week	1.0%	2 T/week
Glass - Recyclable	1.1%	6 T/week	1.2%	2 T/week
Textiles - Clothing	1.7%	9 T/week	2.4%	5 T/week
Rubble - Cleanfill	2.3%	12 T/week	0.7%	1 T/week
Timber - Reusable	1.4%	8 T/week	4.5%	9 T/week
<b>Subtotal</b>	<b>20.5%</b>	<b>110 T/week</b>	<b>21.8%</b>	<b>43 T/week</b>
<b>Compostable materials</b>				
Kitchen waste	15.6%	84 T/week	15.4%	31 T/week
Compostable greenwaste	9.2%	49 T/week	6.4%	13 T/week
New plasterboard	4.1%	22 T/week	2.7%	5 T/week
Timber - Untreated/unpainted	3.8%	21 T/week	2.5%	5 T/week
<b>Subtotal</b>	<b>32.8%</b>	<b>175 T/week</b>	<b>27.1%</b>	<b>53 T/week</b>
<b>TOTAL – Potentially divertable</b>	<b>53.2%</b>	<b>285 T/week</b>	<b>48.9%</b>	<b>97 T/week</b>

Recyclable and recoverable materials comprised 20.5% of overall waste at Frankton RTS and 21.8% at Wanaka RTS. Compostable materials comprised 32.8% of overall waste at Frankton RTS and 27.1% at Wanaka RTS. Overall, approximately 53.2% of the overall waste at Frankton RTS and 48.9% at Wanaka RTS could have been diverted from landfill disposal.

The largest single divertable component at both RTS was kitchen waste, which comprised 15.6% of the overall waste stream at Frankton RTS and 15.4% at Wanaka RTS. Of the 84 tonnes per week of kitchen waste disposed of to landfill from Frankton RTS, 91% was in kerbside waste.

The second largest divertable component was compostable greenwaste, which comprised 9.2% of the overall waste stream at Frankton RTS and 6.4% at Wanaka RTS.

While a high proportion of waste from Queenstown Lakes District is aggregated at the Frankton and Wanaka RTS and bulk-hauled to Victoria Flats Landfill, a smaller amount is transported directly to the landfill. Information on the waste transported directly to landfill was gathered through two sources:

1. Victoria Flats Landfill weighbridge records - Each load of waste recorded at the weighbridge is classified in a number of fields. These fields include customer, vehicle type, geographic origin, and type of waste. Although loads are classified into 17 types of waste, only five were used for waste from Queenstown Lakes District in the period 18- January - 13 March 2020. These were for COM (commercial), DEM (C&D), RTS, RTS (TYRES), and SPC (special). Four of these five types of waste align closely to activity source categories.
2. Survey by landfill staff - Landfill staff collected a small amount of data, including photos, on loads from Queenstown Lakes District for a two-week period. Although the survey produced a relatively small quantity of information, the data supported the correlation between the type of waste recorded by the weighbridge and the activity source of the waste.

In the table below, the three waste streams from Queenstown Lakes District to Victoria Flats Landfill are shown in terms of activity source. The Frankton RTS data includes the minor quantity of tyres taken directly to Victoria Flats Landfill.

Activity sources of waste loads from Queenstown Lakes District - 18 January - 13 March 2020	Direct to Victoria Flats Landfill	Frankton RTS	Wanaka RTS	Total to Victoria Flats Landfill	
<b>Construction &amp; demolition</b>	14 T/week	154 T/week	58 T/week	226 T/week	27.4%
<b>Industrial/commercial/institutional</b>	73 T/week	126 T/week	71 T/week	270 T/week	32.7%
<b>Landscaping &amp; earthworks</b>	0	16 T/week	2 T/week	18 T/week	2.2%
<b>Residential</b>	0	15 T/week	9 T/week	24 T/week	2.9%
<b>Subtotal - general waste</b>	<b>87 T/week</b>	<b>311 T/week</b>	<b>140 T/week</b>	<b>538 T/week</b>	<b>65.1%</b>
<b>Kerbside waste (private &amp; Council)</b>	0	225 T/week	57 T/week	283 T/week	34.2%
<b>Special wastes</b>	5 T/week	0	0	5 T/week	0.7%
<b>TOTAL</b>	<b>92 T/week</b>	<b>536 T/week</b>	<b>198 T/week</b>	<b>826 T/week</b>	<b>100.0%</b>

An average of 826 tonnes per week of waste from Queenstown Lakes District was disposed of at Victoria Flats Landfill during the period 18 January - 14 March 2020

Kerbside waste, which includes both Council and privately collected waste from both residential and commercial properties, was the largest activity source of waste disposed of at Victoria Flats Landfill. Kerbside waste comprised 283 tonnes per week, or 34.2% of the total. ICI waste was the second largest activity source, comprising 270 tonnes per week, or 32.7% of the total.

In the table on the next page, the activity sources of waste from Queenstown Lakes District that was disposed of at Victoria Flats Landfill during the period 18 January - 14 March 2020 is compared to the comparable data from July - August 2016.



Activity sources of waste loads from Queenstown Lakes District - 2020 and 2016	Tonnes/week 18 January - 13 March 2020	Tonnes/week July - August 2016	Change 2016-2020
Construction & demolition	226 T/week	209 T/week	8%
Industrial/commercial/institutional	270 T/week	152 T/week	77%
Landscaping & earthworks	18 T/week	5 T/week	278%
Residential	24 T/week	23 T/week	3%
<b>Subtotal - General waste</b>	<b>538 T/week</b>	<b>390 T/week</b>	<b>38%</b>
Kerbside waste (private & Council)	283 T/week	179 T/week	58%
Special wastes	5 T/week	30 T/week	-82%
Glass from Wakatipu MRF		51 T/week	-100%
<b>TOTAL</b>	<b>826 T/week</b>	<b>649 T/week</b>	<b>27%</b>

The overall tonnage of waste disposed of to Victoria Flats Landfill from Queenstown Lakes District increased 27% between the 2016 and 2020 surveys. Kerbside waste and ICI waste both showed substantial increases, of 58% and 77% respectively. C&D waste increased 8%.

The composition of waste disposed of to Victoria Flats Landfill from Queenstown Lakes District is shown in the table on the next page. In the calculations the compositions of C&D waste and ICI waste disposed of directly to landfill have been assumed to be the same as at Frankton RTS.

As well as waste from Queenstown Lakes District, Victoria Flats Landfill accepts most of the waste from Central Otago District and minor amounts from Mackenzie District. Using the geographic origin code for each load in the weighbridge records, the analysis of the geographic source of waste, shown below, has been calculated. The results from the February 2020 survey are compared to those from the August 2016 survey in the table.

Geographic source of waste to Victoria Flats Landfill 2020 and 2016	Tonnes/week 18 January - 13 March 2020	Tonnes/week July - August 2016	Change 2016-2020
Central Otago District	259 T/week	154 T/week	68%
Mackenzie District	5 T/week	2 T/week	146%
Queenstown Lakes District	826 T/week	649 T/week	27%
<b>TOTAL</b>	<b>1,090 T/week</b>	<b>805 T/week</b>	<b>35%</b>

The overall tonnage of waste to Victoria Flats Landfill increased 35% between the two surveys, from 805 tonnes per week in 2016 to 1,090 tonnes per week in 2020. Waste from Central Otago District increased 68% in the four-year period while waste from Queenstown Lakes District increased 27%.

Waste to Victoria Flats Landfill from Queenstown Lakes District 18 January - 13 March 2020		% of total	Tonnes/week
<b>Paper</b>	Recyclable	4.6%	38 T/week
	Cardboard	5.4%	45 T/week
	Non-recyclable	1.3%	11 T/week
	<b>Subtotal</b>	<b>11.3%</b>	<b>93 T/week</b>
<b>Plastics</b>	Recyclable	1.7%	14 T/week
	Non-recyclable	10.6%	87 T/week
	<b>Subtotal</b>	<b>12.2%</b>	<b>101 T/week</b>
<b>Organics</b>	Kitchen waste	14.3%	118 T/week
	Compostable greenwaste	8.0%	66 T/week
	Non-compostable greenwaste	2.4%	20 T/week
	Organics other	1.4%	11 T/week
	<b>Subtotal</b>	<b>26.0%</b>	<b>215 T/week</b>
<b>Ferrous metals</b>	Primarily ferrous	1.1%	9 T/week
	Steel other	1.4%	12 T/week
	<b>Subtotal</b>	<b>2.5%</b>	<b>21 T/week</b>
<b>Non-ferrous metals</b>		<b>0.8%</b>	<b>6 T/week</b>
<b>Glass</b>	Recyclable	1.1%	9 T/week
	Glass other	0.8%	6 T/week
	<b>Subtotal</b>	<b>1.9%</b>	<b>15 T/week</b>
<b>Textiles</b>	Clothing/textiles	1.8%	15 T/week
	Multimaterial/other	3.4%	28 T/week
	<b>Subtotal</b>	<b>5.2%</b>	<b>43 T/week</b>
<b>Sanitary paper</b>		<b>3.8%</b>	<b>32 T/week</b>
<b>Rubble</b>	Cleanfill	1.8%	15 T/week
	New plasterboard	3.6%	29 T/week
	Other	6.3%	52 T/week
	<b>Subtotal</b>	<b>11.7%</b>	<b>97 T/week</b>
<b>Timber</b>	Reusable	2.2%	18 T/week
	Unpainted & untreated	3.5%	29 T/week
	Non-recoverable	16.4%	136 T/week
	<b>Subtotal</b>	<b>22.0%</b>	<b>182 T/week</b>
<b>Rubber</b>		<b>1.0%</b>	<b>8 T/week</b>
<b>Potentially hazardous</b>		<b>1.5%</b>	<b>12 T/week</b>
<b>TOTAL</b>		<b>100.0%</b>	<b>826 T/week</b>