

# Household Hazardous Waste Program



Year 3, Third Quarter:  
November 2010 to January 2011



WALGA



MUNICIPAL WASTE ADVISORY COUNCIL  
*"Getting the Environment Right"*



Waste Authority

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Municipal Waste Advisory Council Report  
February 2011

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# 1. Executive Summary

1 November 2010 to 31 January 2011 was the third quarter of the third year of the Household Hazardous Waste (HHW) Program. This is the final year of the pilot phase of the Program.

In this quarter, two temporary collection days were held. The Town of Bassendean collection was a 'fully funded' collection day and the collection hosted by the City of Wanneroo was a 'co-funded' day. A total of 455 vehicles attended the days, disposing of more than 15 tonnes of HHW, at a disposal cost of \$133,955 plus GST.

From the permanent facilities, almost 52 tonnes of CFL's, paint gas bottles, and general HHW was collected, at a disposal cost of \$275,274 plus GST.

A total of 67,171.5kg of household hazardous waste was collected through the temporary collection days and permanent storage facility collections in this quarter. Paint (water and solvent based) was the greatest material collected by weight, and had the greatest cost of disposal.

The current HHW Program was due to end on 30 April 2011, but has been extended until 30 June. Work is currently underway to develop the tender documents for the next phase of the Program (2011-15), and the DEC-WALGA HHW Program Agreement is in draft form and under consideration by the Waste Authority.

Data is now available for the amount and cost of HHW collected for two full years of the HW Program (1 January 2009 to 31 December 2010) (Appendix 1).

## 2. Recommendations

This Report provides an overview of the third quarter of the third year of the Household Hazardous Waste Program, detailing the activities and expenditure, for consideration by the Waste Authority.

**Recommendation 1:** That the Waste Authority note the progress of the Household Hazardous Waste Program.

### 3. Temporary Collection Days

In the third quarter of the third year of the Household Hazardous Waste Program (November 2010 to January 2011), two temporary collection days were held (Table 1). These collections were funded through two different mechanisms:

- **Fully funded (Town of Bassendean):** the HHW Program covers the costs of promotion, running the collection and disposal of HHW; and
- **Co-funded (City of Wanneroo):** the HHW Program covers the cost of HHW disposal, and reimburses some promotional costs. The host Regional Council/Local Government funds the running and promotion of the collection.

**Table 1:** HHW Program temporary collection days held November 2010 to January 2011.

Date	Regional Council	Location	No. of Vehicles Attending	HHW Collected (kg)	Cost of HHW disposal (not inc. GST)
13/11/2010	MRC	City of Wanneroo	155	5,246kg	\$51,969.10
04/12/2010	EMRC	Town of Bassendean	300	9,982kg	\$81,986.80
<b>TOTAL</b>			<b>455</b>	<b>15,228kg</b>	<b>\$133,955.90</b>

455 vehicles attended the temporary collection days held in this quarter. A total of 15,228kg of HHW was disposed of, or an average of 33.5kg per vehicle (Table 1).

Table 2 shows a comparison between the promotional methods used at the four temporary collection days held in the last two quarters. Using this data, and data from previous collections, the effect of the use of fliers to promote a temporary collection day can be seen. When fliers were used to promote the collections, an average of 219 vehicles attended and each collection yielded an average of 5,681kg of HHW. In comparison, when fliers were not used, average attendance was almost halved (110 vehicles) and the average amount of HHW collected was greatly reduced (3,423kg). It also appears that when the flyers are distributed can have an effect on the number of attendees. Where flyers were delivered one week prior to the TCD appear to be more effective than those delivered two weeks before (Table 2), however more data is needed to confirm this.

At the temporary collection days in this quarter paint made up the largest weight of material collected. Solvent based paint made up 39% of HHW collected by weight (Figure 1) and 47% of disposal costs (Figure 2). Water based paint was 20% by weight, and 21% of disposal costs. Almost 9 tonnes of paint was collected through the temporary collection days.

Lead acid batteries (23%) and propane gas cylinders (8%) were also significant materials by weight at this collection (Figure 1), however lead acid batteries made up only 4% and propane gas cylinders 0.94% (included in 'Other' in Figure 2) of disposal costs.

The most expensive materials to dispose of were solvent based paint (47%), water based paint (21%), and non-Schedule X pesticides (14%) (Figure 2).

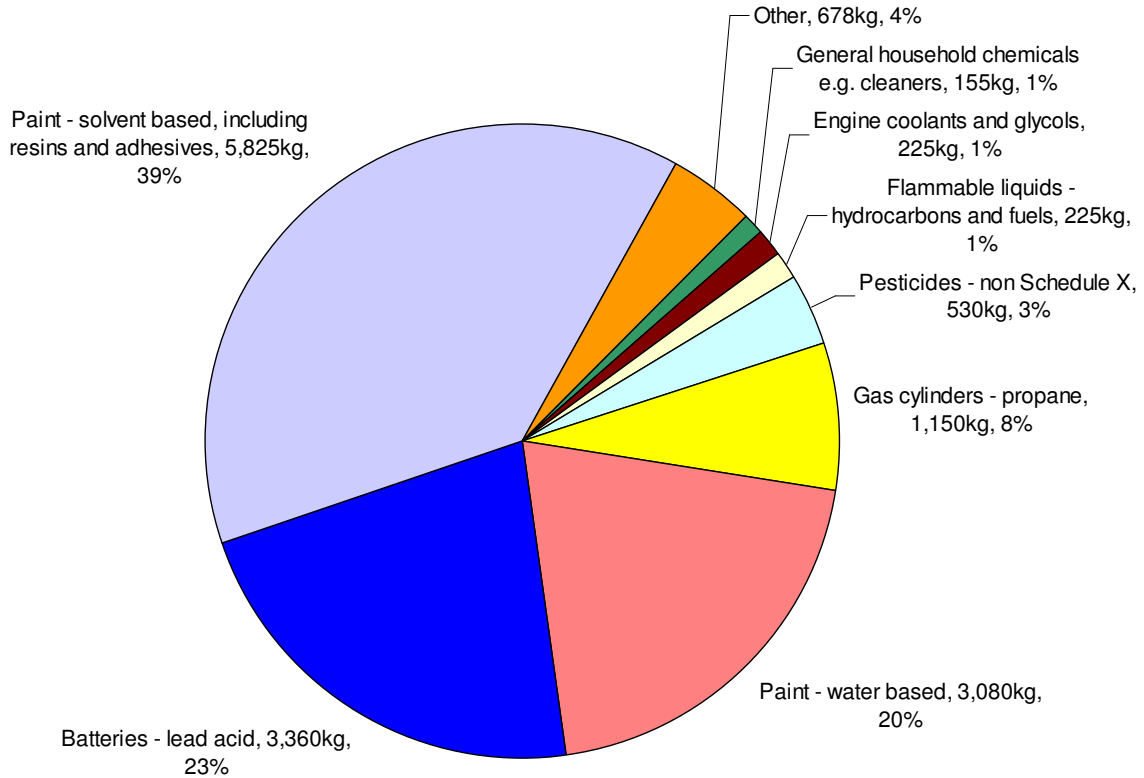
In December a budget review took place, and four temporary collection days were scheduled for January to June 2011:

- **12 February 2011:** Fully funded collection at the JRF (Jim) McGeough Resource Recovery Facility (WMRC)
- **26 February 2011:** Co-funded collection in the Town of Vincent (MRC)
- **16 April 2011:** Fully funded collection in the City of Melville (SMRC)
- **1 May 2011:** Co-funded collection in the City of Mandurah (RRC) – this is yet to be confirmed, and another budget review will take place closer to the collection date to determine whether or not it will go ahead.

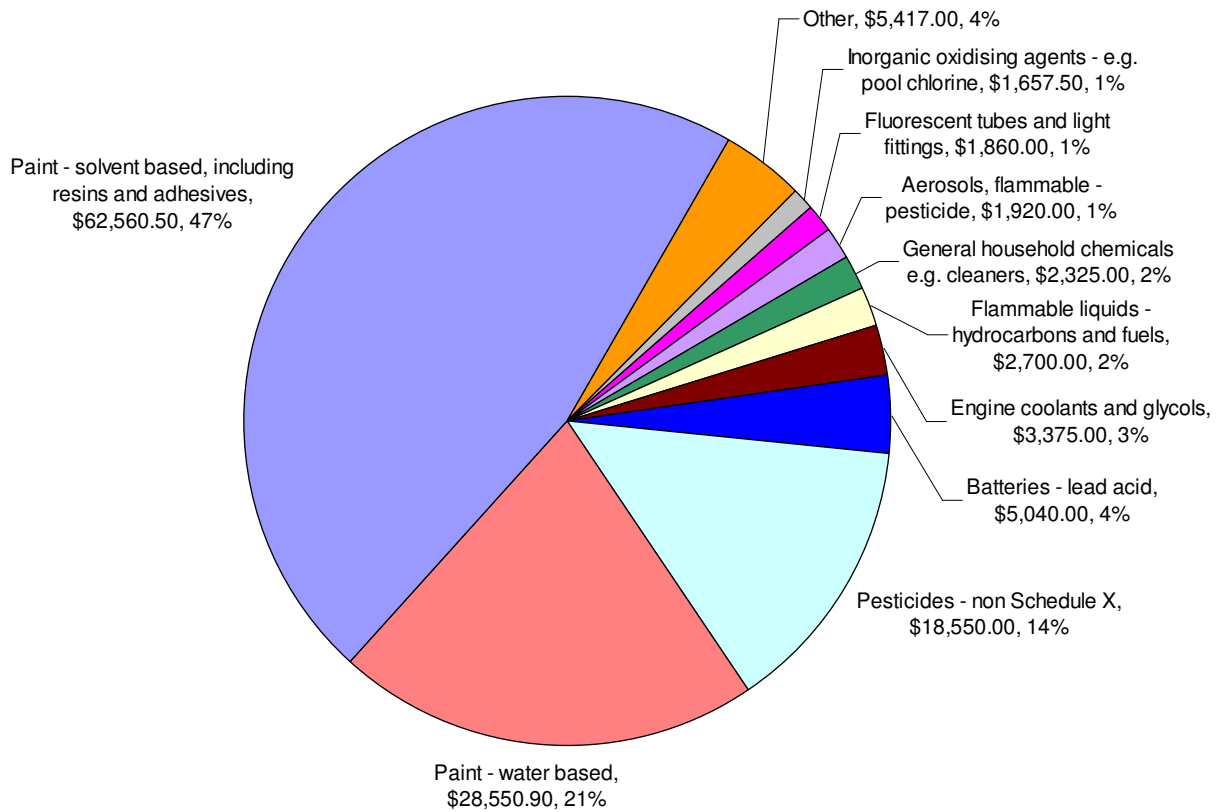
**Table 2:** Comparison of promotional activities for temporary collection days held August 2010 to January 2011.

Promotional Method	SMRC TCD 28/08/10 (fully funded collection day)	City of Gosnells TCD 16/10/10 (co-funded collection day)	City of Wanneroo TCD 13/11/10 (co-funded collection day)	Town of Bassendean TCD 04/12/10 (fully funded collection day)
<b>Community Newspaper</b>	<ul style="list-style-type: none"> <li>Melville Times, Canning Times and Fremantle-Cockburn Gazette (101,669 dwellings, 276,186 people)</li> <li>20x4 colour ad placed in all papers two weeks prior to collection day</li> </ul>	<ul style="list-style-type: none"> <li>Gosnells Examiner and Comment News (111,441 dwellings, 234,851 people)</li> <li>Half page colour ad placed in the Gosnells Examiner three weeks before collection day</li> <li>Half page colour ad placed in Comment news one and two weeks before collection day</li> </ul>	<ul style="list-style-type: none"> <li>North Cost Times and Joondalup-Wanneroo Times (87,782 dwellings and 260,627 people)</li> <li>20x4 colour ad in both papers for the two weeks prior to collection day</li> </ul>	<ul style="list-style-type: none"> <li>Funded by the HHW Program: 20x4 colour ad placed in Southern Gazette and Eastern Suburbs Reporter two weeks prior to collection day</li> <li>Funded by the EMRC: 20x4 colour ad placed in Midland/Kalamunda Reporter, Hills Gazette, Midland Echo, and Gidgegram two weeks prior to collection day</li> <li>Total of 234,340 dwellings and 547,340 people</li> </ul>
<b>Fliers</b>	60,000 fliers delivered to suburbs surrounding the Canning Vale RRRRC (SMRC and RRC) one week prior to collection day	n/a	53,000 flyers delivered to all households in City of Wanneroo two weeks prior to collection day	60,000 fliers delivered to suburbs surrounding the Town of Bassendean one week prior to collection day
<b>Website</b>	Collection date listed on MWAC WasteNet website	<ul style="list-style-type: none"> <li>Collection date listed on MWAC WasteNet website</li> <li>Advertised on City of Gosnells website homepage</li> </ul>	<ul style="list-style-type: none"> <li>Collection date listed on MWAC WasteNet website</li> <li>Promoted on MRC website</li> <li>Promoted on Wanneroo website</li> </ul>	<ul style="list-style-type: none"> <li>Collection date listed on MWAC WasteNet website</li> <li>Advertised on EMRC website</li> <li>Link to EMRC website from Bassendean website</li> </ul>
<b>WALGA Newsletters</b>	Advertised in August edition of MWAC Information Bulletin	<ul style="list-style-type: none"> <li>Advertised in August edition of MWAC Information Bulletin</li> <li>Advertised in the October edition of WALGA Eco News</li> </ul>	<ul style="list-style-type: none"> <li>Advertised in August edition of MWAC Information Bulletin</li> <li>Advertised in the October edition of WALGA Eco News</li> </ul>	<ul style="list-style-type: none"> <li>Advertised in August edition of MWAC Information Bulletin</li> <li>Advertised in the October edition of WALGA Eco News</li> </ul>
<b>Other</b>	n/a	A5 colour ad placed in quarterly "City Programs" Booklet (delivered to all residents of the City of Gosnells)	Banner erected at the collection site for the week leading up to the TCD	Waste and Recycling Guide 2010/11 (delivered to all EMRC residents)
<b>Total Cost of Promotion*</b>	\$7,301.12 plus GST (includes one-off cost of flier and newspaper ad design)	\$2,919.47 plus GST	\$7,960.00 plus GST	HHW Program: \$6,641.62 plus GST EMRC: \$1,820.00 plus GST
<b>No. Vehicles attending TCD</b>	281	127	155	300
<b>Total HHW disposed of at TCD</b>	12,415kg (44.2kg per vehicle)	3,850kg (30.3kg per vehicle)	5,246kg (33.9kg per vehicle)	9,982kg (33.3kg per vehicle)

\* excludes in-kind contribution of Officer time.



**Figure 1:** HHW materials collected through temporary collection days in the third quarter, year three (by weight).



**Figure 2:** HHW materials collected through temporary collection days in the third quarter, year three (by cost of disposal).

## 4. Permanent Facilities

Five collections of general household hazardous waste (all categories of HHW) were made from permanent HHW storage facilities in the third quarter, year three (Table 3). There were also 15 collections of specific HHW types from the permanent facilities (Table 4).

**Table 3:** Household Hazardous Waste Program permanent facility collections (general HHW) November 2010 to January 2011.

Date	Regional Council	Location	HHW Collected (kg)	Cost of HHW disposal (not inc. GST)
29/10/2010*	SMRC	Henderson	6,900kg	\$67,296.10
25/11/2010	MRC	Balcatta	3,552kg	\$40,329.30
1/12/2010	MRC	Tamala Park	3,372kg	\$46,019.90
14/12/2010	EMRC	Red Hill	1,810kg	\$34,417.50
30/12/10	SMRC	Henderson	4,152.5kg	\$56,596.80
<b>TOTAL</b>			<b>19,786.5kg</b>	<b>\$244,659.60</b>

\* Collection occurred in the second quarter, but was not invoiced until the third quarter, year 3.

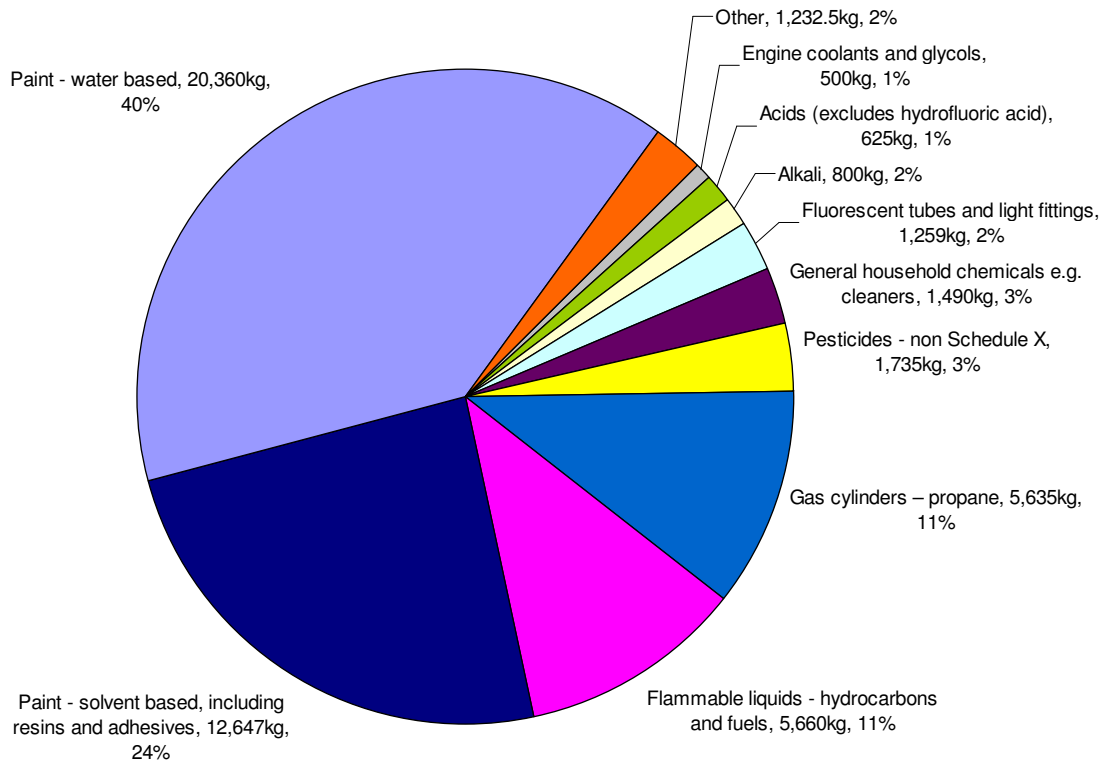
**Table 4:** Household Hazardous Waste Program permanent facility collections (specific HHW types) November 2010 to January 2011.

Date	Regional Council	Location	Type of HHW	HHW Collected (kg)	Cost of HHW disposal (not inc. GST)
29/10/2010*	SMRC	Henderson	Paint	3,936kg	\$3,125.00
29/10/2010*	MRC	Balcatta	Gas Bottles	1,540kg	\$1,695.00
2/11/2010*	EMRC	Mathieson Rd	CFL's	144kg	\$748.80
2/11/2010*	EMRC	Mathieson Rd	CFL's	343kg	\$908.95
4/11/2010*	MRC	Tamala Park	Paint	7,380kg	\$5,798.75
12/11/2010*	MRC	Balcatta	CFL's	35kg	\$134.25
1/12/2010	MRC	Tamala Park	Paint	6,150kg	\$5,216.25
8/12/2010	Metro battery recycling		Batteries (transport only)	22,620kg (estimate only)	\$11,765.43 (transport cost)
14/12/2010	EMRC	Red Hill	Paint	2,706kg	\$2,300.00
21/12/2010	EMRC	Red Hill	CFL's	177kg	\$946.95
30/12/2010	SMRC	Henderson	Paint	2,706kg	\$2,663.75
30/12/2010	SMRC	Henderson	Paint (Isocyanate)	246kg	\$540.00
6/01/2011	WMRC	JFR McGeough	Paint	492kg	\$451.25
6/01/2011	MRC	Tamala Park	Paint	5,412kg	\$4,842.50
7/01/2011	MRC	Balcatta	Gas Bottles	890kg	\$1,243.00
<b>TOTAL</b>				<b>32,157kg</b> (not inc. battery estimate)	<b>\$30,614.45</b> (not inc. battery transport)

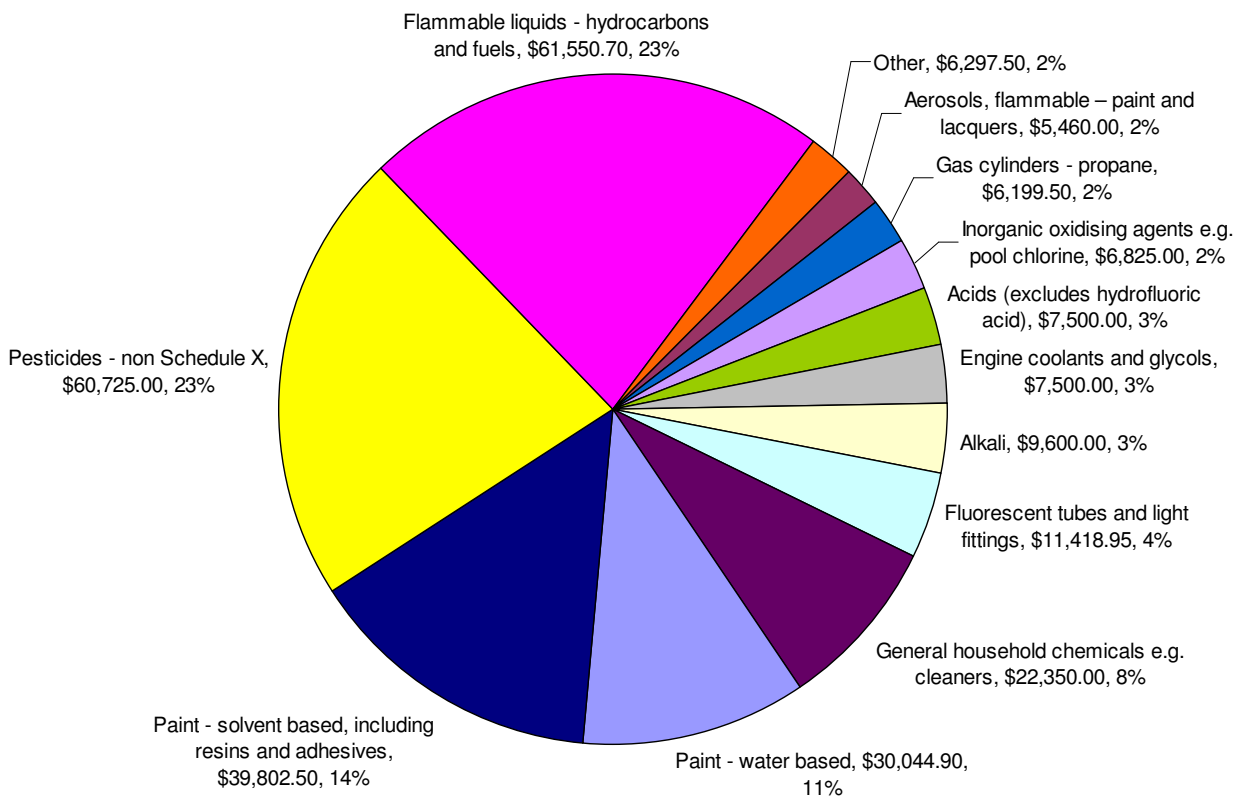
\* Collection occurred in the second quarter, but was not invoiced until the third quarter, year 3.

\*\* Drummed paint collections occurred at the same time as general HHW collections from the permanent facilities (Table 3).

In total 51,943.5kg of HHW was collected through the permanent facilities during this quarter, with 62% of this collected through the specific material collections. Total disposal cost was \$275,274.05 plus GST.



**Figure 3:** HHW materials collected through permanent facilities in the third quarter, year three (by weight).



**Figure 4:** HHW materials collected through permanent facilities in the third quarter, year three (by cost of disposal).

In this quarter water based paint was the greatest material collected by weight through the permanent facilities (40%). Solvent based paint (24%), flammable liquids (11%) and propane gas cylinders (11%) were also significant materials by weight (Figure 3).

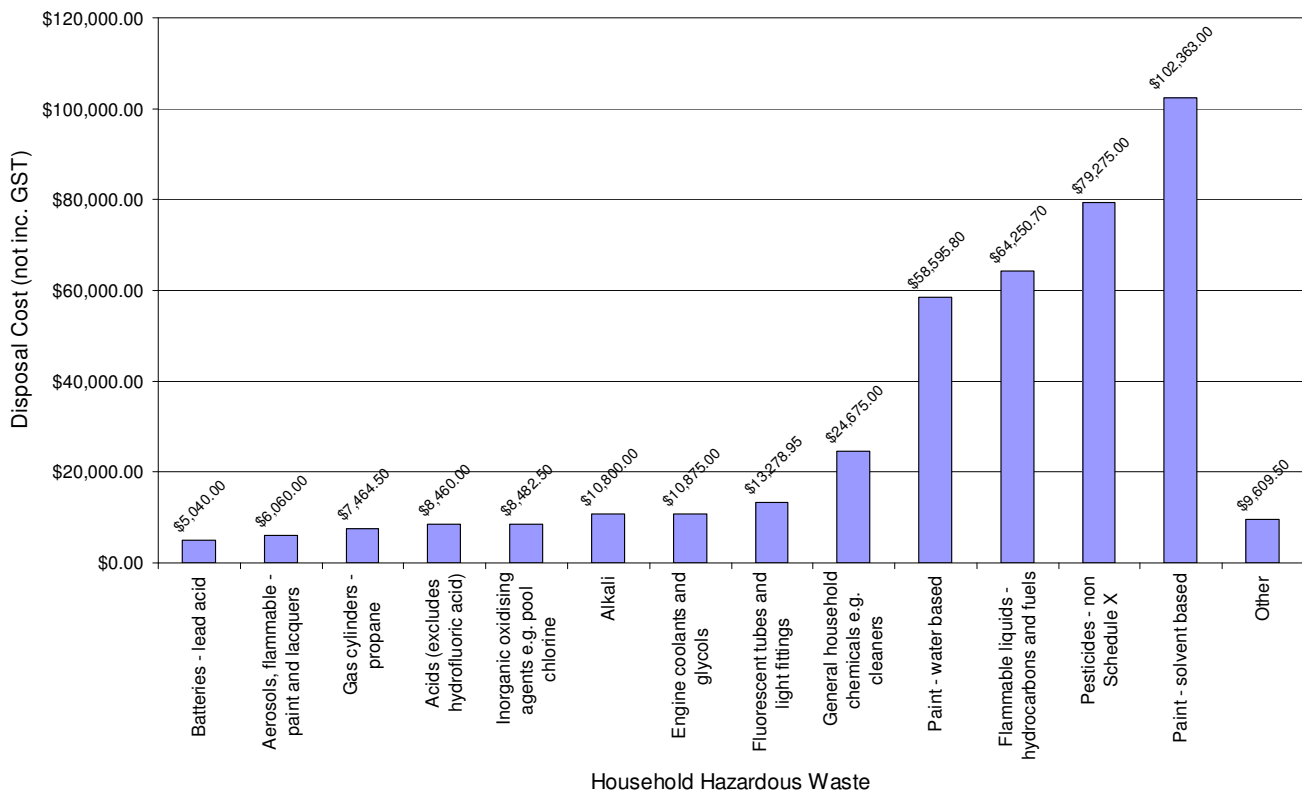
Flammable liquids were the most expensive materials to dispose of through the permanent facilities in this quarter (23% of disposal costs). The other most expensive materials were non-Schedule X pesticides (14%), solvent based paint (14%) and water based paint (11%) and general household chemicals (8%) (Figure 4).

In December 2010 the second shipment of batteries collected through the metropolitan household battery recycling bin program was sent to AusZinc in NSW for recycling. The batteries were collected between April and November 2010, and each Regional Council organised for their batteries to be amalgamated and picked up 13 December. The batteries have not yet been recycled, so no accurate data about the amount of batteries collected is available, however the estimated transport weight was 22,620kg (the actual total will be reported in the fourth quarter report). The next battery shipment will take place in approximately six to eight months time.

Figure 5 shows the combined disposal cost of HHW from the permanent facilities and temporary collection days held during this quarter.

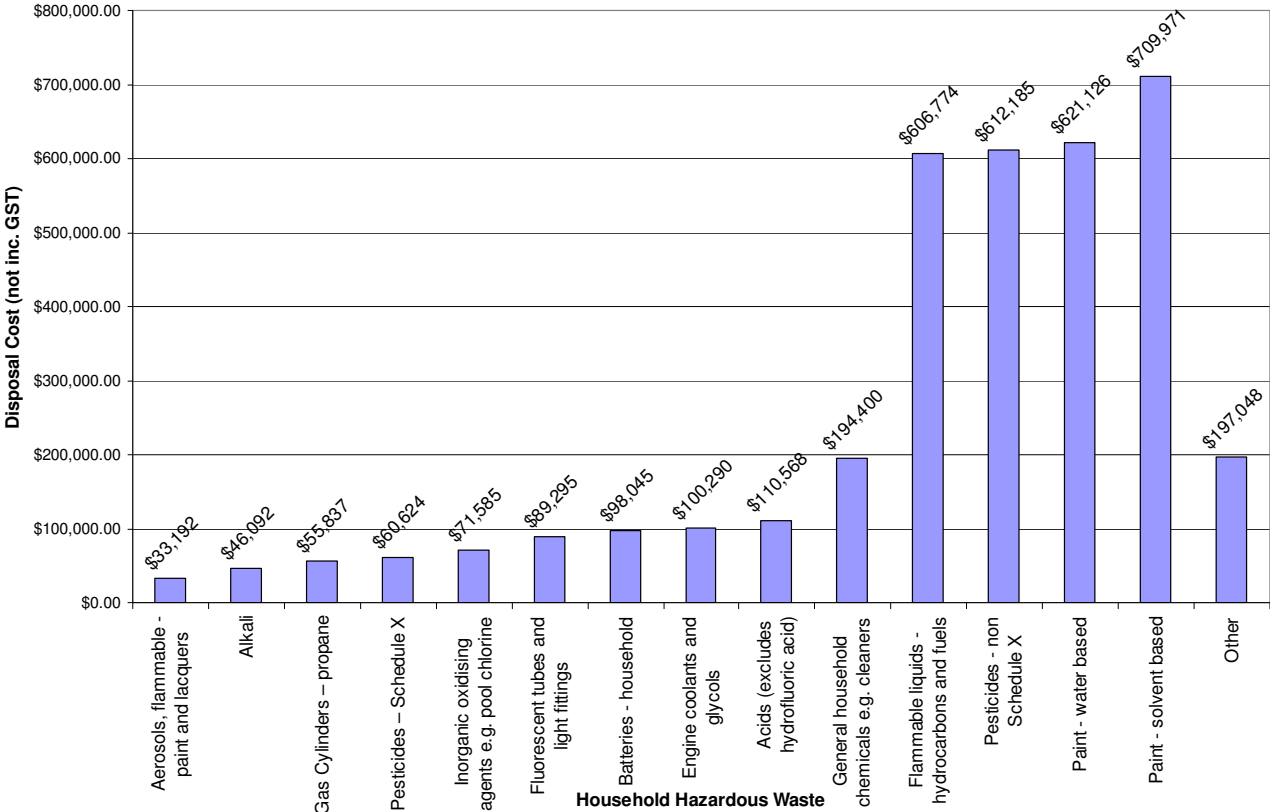
A total of \$409,229 plus GST was spent on HHW disposal this quarter. Overall, the four most expensive materials in terms of cost of disposal, from both temporary collection days and permanent facility collections, were (Figure 5):

1. Solvent based paint
2. Non-Schedule X pesticides
3. Flammable liquids (hydrocarbons and fuels)
4. Water based paint



**Figure 5:** Cost of disposal of household hazardous waste from temporary collection days and permanent facility collections in the third quarter, year three.

Over the last two years (1 January 2009 to 31 December 2010) a total of 494,414.8kg of HHW has been collected through the HHW Program, with a total disposal cost of \$3,607,030 plus GST (Appendix 1). In this period (Figure 6), as in the third quarter (Figure 5) water and solvent based paint, non-schedule X pesticides and flammable liquids were the most expensive materials to dispose of.

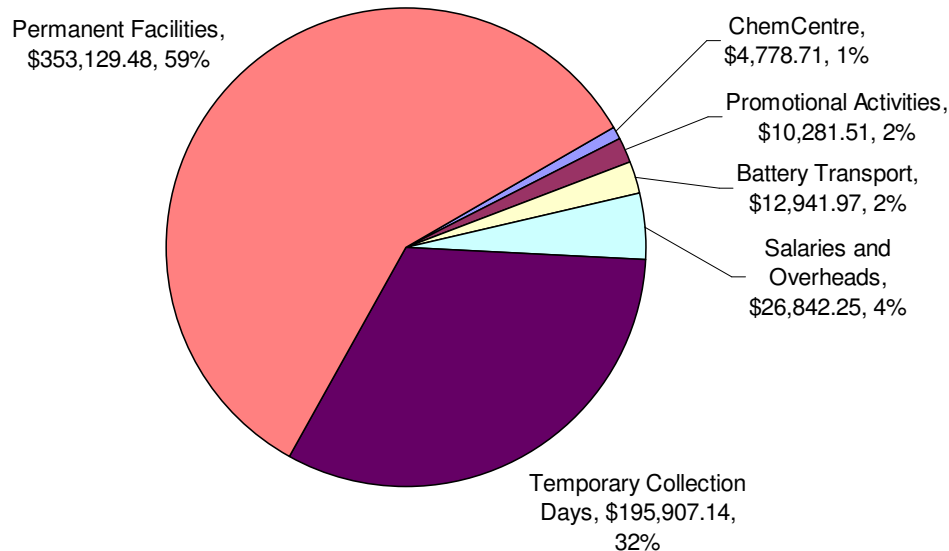


**Figure 6:** Cost of disposal of household hazardous waste from temporary collection days and permanent facility collections 1 January 2009 to 31 December 2010.

## 5. Budget

In the third quarter, year three of the HHW Program, funds of \$603,881 inc. GST were required (Table 6). \$580,041 inc. GST came from HHW Program annual funding, and an additional \$23,839 inc. GST was contributed by the Mindarie Regional Council for the City of Wanneroo co-funded temporary collection day.

The largest areas of expenditure were temporary collection days (32%) and permanent facility collections (general and specific material collections) (59%) (Figure 7).



**Figure 7:** Household Hazardous Waste Program expenditure (inc. GST) by activity, November 2010 to January 2011.

In this quarter \$17,388 plus GST was saved due to the contract variation negotiated with Toxfree for the disposal cost of paint and flammable liquids.

The current HHW Program will be extended until 30 June 2011 to coincide with the end of the 2010-11 financial year.

For the remaining five months of year three of the HHW Program, February to June 2011, a budget of \$1,508,378 including GST remains:

\$3,249,149.19 inc. GST	2010-11 annual budget
— \$376,375.95 inc. GST	First quarter expenditure
— \$784,353.48 inc. GST	Second quarter expenditure
— \$580,041.31 inc. GST	Third quarter expenditure
<b>\$1,508,378.45 inc. GST</b>	<b>Remaining budget for February to June 2011</b>

\$1,740,770 inc. GST (or 53.6%) of the HHW Program annual budget for year three was spent in the first three quarters.

**Table 5:** Estimated and actual expenditure (inc. GST) for the HHW Program, May 2010 to January 2011.

	2010-11 Budget inc. GST	Average Expected Expenditure for 1st-3rd Quarters inc. GST	Actual Expenditure for 1st-3rd Quarters inc. GST	Percentage of estimated budget actually spent in 1st- 3rd Quarters	Over spend/ Under spend for 1st-3rd Quarters inc. GST
<b>Operating budget for 2010-11 (inc. shortfall from 2009-10)</b>	<b>\$3,249,149</b>	<b>\$2,436,862</b>	<b>\$1,740,771</b>	<b>71.4</b>	<b>-\$696,091.15</b>
Metro Permanent Facility General Collections	\$1,210,000	\$907,500	\$1,052,149	115.9	\$144,649.02
Metro Permanent Facility CFL and Drummed Paint Collections	\$44,000	\$33,000	\$111,549	338.0	\$78,549.42
Metro permanent facility infrastructure development	\$110,000	\$82,500	\$0	0.0	-\$82,500.00
Non-metro Permanent Facility Collections	\$330,000	\$247,500	\$0	0.0	-\$247,500.00
Non-metro permanent facility infrastructure development	\$110,000	\$82,500	\$0	0.0	-\$82,500.00
Permanent Facility Staff Training	\$11,000	\$8,250	\$3,145	38.1	-\$5,105.31
Temporary Collection Days - fully funded	\$550,000	\$412,500	\$260,045	63.0	-\$152,455.38
Temporary Collection Days - optional co contribution	\$498,260	\$373,695	\$97,228	26.0	-\$276,467.13
HHW Program Promotion	\$44,000	\$33,000	\$18,313	55.5	-\$14,687.26
Battery Collection	\$220,000	\$165,000	\$101,425	61.5	-\$63,574.82
Chemistry Centre	\$14,520	\$10,890	\$16,390	150.5	\$5,500.31
Salaries	\$68,652	\$51,489	\$51,489	100.0	\$0.00
Overheads	\$38,717	\$29,038	\$29,038	100.0	\$0.00

Table 5 shows the different activities on which funds were spent in the first three quarters of year three of the HHW Program (May 2010 to January 2011).

The "Average Expected Expenditure" for the first three quarters in Table 5 is 75% of the total 2010-11 budget. This gives a rough estimate of expenditure over six months, however the timing of actual expenditure is variable. Except for the overheads and salaries, and the temporary collection days (which are scheduled for a specific day in advance) expenditure occurs 'on demand' (e.g. the permanent facilities will arrange for HHW to be collected whenever they are full). However, Table 5 does enable an analysis how much has been spent on each type of activity in the last nine months.

- **Salaries and overheads:** were exactly as predicted, as these are set by WALGA at the beginning of each financial year.
- **Metropolitan Permanent Facility Collections (General and Specific Materials):** Collections from metropolitan permanent facilities (general HHW and specific materials collection) were more expensive than predicted. However, these costs have been covered by under spending on other areas.

- **Metropolitan permanent facility infrastructure development:** No funds have been spent developing/upgrading permanent facilities in the metropolitan area. In February 2011 the WMRC has planned to build a new HHW permanent facility at the JFR (Jim) McGeough Transfer Station. This will cost less than the total budget allocated, and the extra funds will be used to cover collections from existing permanent facilities.
- **Non-metropolitan Permanent Facility Collections:** One collection has occurred from the Bunbury-Harvey Regional Council, and it is expected that between February and June 2011 collections will occur from the City of Geraldton-Greenough and the City of Mandurah. This is likely to cost less than the total budget allocated, and the extra funds will be used to cover collections from existing permanent facilities.
- **Non-metropolitan permanent facility infrastructure development:** No infrastructure development has occurred so far. The City of Albany has begun construction of a permanent facility at the Hanrahan Rd Waste Minimisation Facility, and the City of Geraldton-Greenough is in the process of upgrading their existing facility. The HHW Program has not yet been invoiced for this expenditure. This is likely to cost less than the total budget allocated, and the extra funds will be used to cover collections from existing permanent facilities.
- **Staff training:** One training session has been held, and another has been scheduled for 25 February 2011.
- **Temporary Collection Days – fully funded:** This area has been under spent so far, because only two fully funded temporary collection days have been held. There are fully funded collections scheduled for 12 February (WMRC) and 16 April (City of Melville). It is likely all of these funds will be spent.
- **Temporary Collection Days – co-funded:** This area has been under spent because only two co-funded temporary collection days have been held. There is one co-funded day scheduled for 26 February (Town of Vincent), and one may be held on 1 May (City of Mandurah) as the budget allows.
- **Promotional activities:** This area has been underspent because only four temporary collection days have been held. As more TCD's are scheduled, more promotional activities will occur.
- **Battery Collection (Metropolitan Battery Recycling Bin Program):** This area has been underspent, because the batteries shipped to AusZinc in December 2010/January 2011 have not yet been recycled. It is anticipated that all funds will be spent. The next battery shipment will take place in the next financial year.

It is anticipated that even with the extension of the current HHW Program until 30 June 2011 (an extra 2 months) the 2010-11 annual budget will be adequate. Reduced spending on infrastructure and temporary collections days should allow sufficient funds to cover collections from the permanent facilities.

**Table 6:** Household Hazardous Waste Program expenditure November 2010 to January 2011.

Invoice Issued	Invoice Number	Date of Works	Council/organisation	Amount (inc. GST)	Remaining Budget inc. GST
31/10/2010	PKWS01960	29/10/2010	MRC - Gas bottles Balcatta PF	\$2,559.04	\$2,085,860.72
3/11/2010	SINV020961	22/10/2010	MRC - 20 empty paint drums Tamala Park PF	\$660.00	\$2,085,200.72
3/11/2010	SINV020960	7/09/2010	MRC - CFL's CMA	\$2,016.96	\$2,083,183.76
15/11/2010	EMRC9427	2/11/2010	EMRC - CFL's CMA	\$922.68	\$2,082,261.08
15/11/2010	EMRC9428	2/11/2010	EMRC - CFL's CMA Mathieson Rd	\$1,098.85	\$2,081,162.23
17/11/2010	SINV021063	13/11/2010	Contribution to Wanneroo TCD Promotion	\$1,666.00	\$2,079,496.23
23/11/2010	55259	18/11/2010	Scott Print - flier printing Basendean TCD	\$1,914.00	\$2,077,582.23
23/11/2010	11209	4 collections	Stirling - CFL disposal CMA	\$2,258.81	\$2,075,323.42
27/11/2010	878977	27/11/2010	Salmat - flier delivery Bassendean TCD	\$2,954.91	\$2,072,368.51
<b>30/11/2010</b>	<b>PKWS02065</b>	<b>13/11/2010</b>	<b>MRC - Wanneroo TCD co-funded TCD</b>	<b>\$81,432.56**</b>	<b>\$2,014,775.70</b>
30/11/2010	PKWS02066	29/10/2010	SMRC - Henderson PF	\$84,640.71	\$1,930,134.99
30/11/2010	PKWS02067	25/11/2010	MRC - Balcatta PF	\$52,169.37	\$1,877,965.62
7/12/2010	351610H0164	9/11/2010	ChemCentre - chemical testing Balcatta PF	\$2,998.60	\$1,874,967.02
7/12/2010	351710H0165	11/05/2010	ChemCentre - chemical testing Tamala Park PF	\$1,780.11	\$1,873,186.91
19/12/2010	PL216992	08-16/12/10	TOLL - battery transport	\$12,941.97	\$1,860,244.94
21/12/2010	262560	16/12/2010	Contribution to Gosnells TCD promotion	\$1,832.60	\$1,858,412.34
23/12/2010	PKWS02264	4/12/2010	EMRC - Bassendean fully funded TCD	\$114,474.58	\$1,743,937.76
23/12/2010	PKWS02161	1/12/2010	MRC - Tamala Park PF	\$64,287.36	\$1,679,650.40
23/12/2010	PKWS02160	14/12/2010	EMRC - Red Hill PF	\$48,691.39	\$1,630,959.01
29/12/2010	PKWS02167	23/12/2010	WMRC - JFR McGeough PF empty drums	\$321.34	\$1,630,637.67
31/12/2010	55933	31/12/2010	Scott Print - flier printing WMRC TCD	\$1,914.00	\$1,628,723.67
12/01/2011	PKWS02218	6/01/2011	WMRC - JFR McGeough PF paint	\$817.72	\$1,627,905.95
12/01/2011	PKWS02210	6/01/2011	MRC - Tamala Park PF paint	\$6,063.64	\$1,621,842.31
17/01/2011	EMRC9800	16/09/2010	EMRC - CFL's CMA	\$964.10	\$1,620,878.21
20/01/2011	PKWS02237	4/11/2010	MRC - Tamala Park PF paint collection	\$8,311.77	\$1,612,566.44
24/01/2011	EMRC9813	21/12/2010	EMRC - Red Hill CFL's CMA	\$1,140.65	\$1,611,425.79
27/01/2011	PKWS02260	30/12/2010	SMRC - Henderson PF	\$73,680.15	\$1,537,745.64
27/01/2011	PKWS02261	7/01/2011	Stirling - gas bottle disposal	\$2,524.94	\$1,535,220.70
n/a	n/a	n/a	Salaries (\$68,652 annually)	\$17,163.00	\$1,518,057.70
n/a	n/a	n/a	Overheads (\$38,717 annually)	\$9,679.25	\$1,508,378.45
<b>TOTAL</b>				<b>\$603,881.06</b>	

\*\* The total amount spent includes the full cost of the Wanneroo temporary collection day (\$81,432.56 inc. GST). However, this was a co-funded collection, so the HHW Program funded \$57,592.81 inc. GST of this, and the Mindarie Regional Council funded \$23,839.75 inc. GST. Therefore, total funded needed in the quarter were \$603,881.06, but \$580,041.31 inc. GST came from HHW Program annual funding, and an additional \$23,839.75 inc. GST was contributed by the Mindarie Regional Council.

## 6. Discussion and Conclusion

The first phase of the HHW Program ends on 30 June 2011, with the next phase (2011-15) to begin on 1 July.

An Agreement between the DEC and WALGA for the administration of the HHW Program has been drafted. It was reviewed by the Waste Authority in January 2011, and will be considered for endorsement at the Authority's February meeting. Once it has been endorsed by the Waste Authority and WALGA the Agreement can be signed.

Development of the Request for Tender documents is currently underway, pending approval of the next phase of the Program by the Environment Minister, and it is anticipated that WALGA will go out to tender for contractor(s) for the HHW Program 2011-15 in mid to late February 2011.

As Figure 6 shows, paint (water and solvent based) has been the most expensive material to dispose of in the last two years of the HHW Program, as well as the greatest material collected by weight (Appendix 1). WALGA and the DEC are part of the Waste Authority's informal paint working group, which is looking into alternative uses for waste paint (e.g. line marking for sports fields) and is monitoring the progress of the paint product stewardship program trial in Victoria, which is currently under review by the ACCC and is due to begin this year.

If introduced in WA, product stewardship arrangements for paint could potentially significantly decrease HHW Program costs, however this is unlikely to occur in the short term.

Paint is also not the only material that needs to be considered for product stewardship. Non-Schedule X pesticides and flammable liquids are also very significant costs to the HHW Program (\$612,185 and \$606,774 respectively in 2009 and 2010) (Figure 6). The materials are not collected in large volumes, but are proportionally very expensive to dispose of. It is recommended that they be considered for product stewardship in the future.

## APPENDIX 1: Materials Disposed of 1 January 2009 to 31 December 2010

Category No.	Description	TCD's (32) (kg)	PF's (kg)	TOTAL kg
1a	Acids (Excludes Hydrofluoric Acid)	1934	7280	9214
1b	Hydrofluoric Acid	3	11	14
2	Aerosols – CFC based	33	50	83
3	Aerosols, flammable – paint and lacquers	1177	1589	2766
4	Aerosols, flammable - pesticide	514	198	712
5	Alkali	1267	2574	3841
6	Arsenic based products	0	0	0
7	Batteries – lead acid	20599	0	20599
8	Batteries – nickel cadmium	240	1615	1855
9	Batteries – other (excl. Lithium & Thionyl Chloride)	717	445	1162
10	Cyanides	1	0	1
11	Engine coolants and glycols	1478	5208	6686
12	Fire extinguishers – non-Halon	86	1705	1791
13	Flammable liquids - hydrocarbons and fuels	11830	39984	51814
14	Flammable solids	26	524	550
15	Flares	340	135	475
16	Fluorescent tubes and light fittings	896	11631	12527
17	Gas Cylinders – other	1350	2060	3410
18	Gas Cylinders – propane	14360	36400	50760
19	General household chemical eg. cleaners	2230	10730	12960
20	Heavy metal compounds	10	0	10
21	Inorganic oxidising agents – eg pool chlorine	1071	2600	3671
22	Low level radioactive substances eg. smoke detectors	38	5	43
23	Mercury – elemental	0	32	32
24	Organic peroxides	17	1	18
25	Paint - metal based	75	0	75
26	Paint - other, including isocyanates and amines	4	246	250
27	Paint - recyclable	0	0	0
30	PCB materials	0	0	0
31	Pesticides - non Schedule X	6281	11210	17491
32	Pesticides – Schedule X	765	498	1263
33	Solvents – halogenated	85	195	280
34	Toxics	1	944	945
n/a	Batteries - household	0	28012.8	28012.8
n/a	Paint - solvent based	46850	55880	102730
n/a	Paint - water based	43910	114464	158374
<b>TOTAL</b>		<b>158188</b>	<b>336226.8</b>	<b>494414.8</b>