

HALVE OUR WASTE PROGRAM – FRANKSTON CITY COUNCIL INTERNAL EVALUATION REPORT – JUNE 2015

Why 'Halve Our Waste'?

Every year, Australian households throw away approximately 3 million tonnes of food. In Victoria, more than 80% of food waste is currently disposed of in landfill.

In 2010-11, a kerbside audit conducted in Frankston City identified the average household garbage bin contained approximately 54% of compostable organic materials. This equated to 12,665 tonnes of food to landfill that year!

The audit also showed that the garbage bins contained 14% recyclable materials (essentially a lost resource), as well as 32% household waste.



- 1,000 households and 22 local schools engaged to reduce waste-to-landfill.
- Families and larger households with 3 or more people participated, with three-quarters of participants being female aged 25 or over.
- Participants were spread throughout the Frankston City community.
- Most households had been participating from six months to a year.
- Participants considered all program components to be useful, but considered the kitchen caddy and the compost bin to be the most useful.
- Participants found the *HOW* e-newsletter the most useful means of communication, but found the variety of communication tools helpful.
- Participants created a tightly knit *HOW* Facebook group with 304 members. The group is still currently active, sharing knowledge about waste, recycling and sustainable living.
- The waste audits of participants' garbage bins provided valuable data in addition to the surveys – which helped to address the risk of a self-reporting bias – i.e. people have different perceptions of how much waste they reduce.

These results presented an opportunity to educate the Frankston City community on waste reduction. Past programs run by Council, such as the *Halve Garbage Waste* program run in 2006, have had very positive impacts in the community.

Over 87% of people who participated in the original *Halve Garbage Waste* program were still engaged in waste reduction behaviours at the start of *Halve our Waste*. The idea behind the *Halve Our Waste (HOW)* program was therefore to continue and improve upon the momentum of the *Halve Garbage Waste* program.

The aim of the *HOW* program was to work with the local community to reduce waste-to-landfill and to increase the uptake of composting or worm farming.

The *HOW* program provided a holistic approach to waste reduction, focusing on food waste and consumption, targeting residents with young families, large households and school aged children.

In 2012, Council successfully applied for a \$215,000 grant from the Metropolitan Waste and Resource Recovery Group (MWRRRG) to help fund the *Halve our Waste* program.

Implementation

Overall, the *HOW* program ran for 24 months between 2013 and 2015. There were extensive project planning, implementation and evaluation stages, including:

- Project working group formed to guide the project
- Administration Officer engaged
- Evaluation Consultant engaged to research, monitor and evaluate the program
- Contractors engaged: compost bins/worm farms delivery and supplies, kitchen caddies, graphic design, household waste audits, educational workshops etc.
- Registration process developed
- Pre-planning research conducted including a survey, focus groups and literature review
- Communications logo, key messages/incentives and branding design
- Resources developed – Halve Our Waste Toolkit, Schools Toolkit and Activity Kit
- Promotional video published on Halve Our Waste Council webpage
- Establishment of a *HOW* Facebook Group for participants
- Program launch, promotion and recruitment drive through Council's *EnviroNews* e-newsletter, Frankston City News, Council website and social media, local papers and community events, Halve Our Waste letter sent out with rates notice
- Final recruitment of 1,000 households and 22 primary schools and pre-schools
- Workshops and educational program delivered, with over 37 workshops with local schools and community
- *HOW* e-newsletter to help support and encourage participants
- Audits of participating household bins – pre, mid and post program
- Participant evaluation surveys conducted – pre, mid and post program

Households

The *HOW* program reviewed and built on industry knowledge around waste reduction and the barriers and enablers to changing behaviour.

Over 3,000 households expressed interest in participating in the *HOW* program. Because the program had specific targets, criteria was established for selecting participants. Young families and larger households with three or more people were chosen for the program as they identify with being large producers of food waste. Schools were also eligible for the program. From the expressions of interest, Council selected 1,000 eligible households and 22 local schools to participate.



All participating households were given a kitchen caddy to collect food scraps and a free compost bin or subsidised worm farm. Households were given the option of having a home visit to help them set up their compost bin or worm farm and provide educational support.

Households were also given a comprehensive toolkit (see frankston.vic.gov.au) which covered all aspects of food and general waste reduction, including being food wise, shopping smart, composting/worm farming and recycling correctly. Information on recycling specialty items such as soft plastics, household batteries and household chemicals was also included.

During the *HOW* program, households had access to a range of free workshops on topics including:

- ✓ Composting and worm farming
- ✓ Shopping with a Conscience
- ✓ Follow Your Waste tour
- ✓ “Frugavore” Christmas Masterclass
- ✓ Recycling education
- ✓ Cooking with veggies and leftovers
- ✓ Preserving and Bottling

Other useful resources for participating households included online support through the *HOW* Facebook Group and regular *HOW* e-newsletters.

Households were also given the option of changing their weekly kerbside garbage bin to a fortnightly collection, with a \$20 incentive to be processed annually on their rates notice.

Schools

In total, 479 students and 86 teachers from 22 local schools were engaged in the *HOW* program. Participating schools were offered either a free compost bin or worm farm to help them reduce their food waste, as well as workshops with students and teachers on composting and worm farming.

Key Objectives

The key objectives of the *HOW* program were to:

- Change community behaviour to reduce waste- to landfill by 50% (by weight) from participating households
- Reduce the percentage of food waste in participating households’ garbage bins from over 50% to less than 20% (by weight)
- Increase the uptake of composting and recycling by participating schools, pre-schools and households by 30%
- Decrease the percentage of recyclables in the waste stream from participating households from over 14% to under 10% (by weight)
- Increase knowledge of how to compost and reduce/rethink waste in participating schools, pre-schools and households

- Gain a better understanding of the barriers and incentives around waste reduction behaviour, in particular composting and worm farming through comprehensive research and evaluation

Results

The *HOW* program successfully helped residents to reduce their waste through changes in behaviour towards food, waste and consumption. Council reached its target of 1,000 participating households.

The *HOW* schools program also engaged 479 students and 86 teachers from 22 schools and pre-schools.

Highlights of the *HOW* program include:

- ✓ A waste-to-landfill reduction of 13% by participating households
- ✓ Recycling contamination rate of less than 10% by participating households
- ✓ 91% of participating schools and 76% of households received a compost bin, demonstrating a high level of interest and uptake in composting
- ✓ A very low attrition rate, with less than 1% of participating households indicating they were not composting or worm farming at conclusion of the program. Reasons included: it was too complicated, not enough time and too difficult due to living in an apartment
- ✓ Households reported a significant increase in knowledge across the three domains of composting, worm farming and recycling
- ✓ Nearly 90% of teachers reported an excellent or very good understanding of composting and/or worm farming at the program completion, up from 5% prior to the program
- ✓ 95% of the teachers rated the workshops excellent and 90% rated student's involvement as "engaged to highly engaged"
- ✓ Every teacher, 100%, felt that the experience they had through *HOW* would assist them to help their students reduce their waste in their schools and in the community and make more sustainable lifestyle choices
- ✓ As a result of the program, a better understanding of barriers and incentives has been gained



In terms of engagement, participating households reported feeling like they were part of a 'community taking positive action'. Some highlights included:

- ✓ More than one third of participants joined the *HOW* Facebook group (304 users)
- ✓ Seven hundred and eighty seven (787) participants signed up to the *HOW* e-newsletter

- ✓ 337 residents attended educational workshops (not all *HOW* participants). More than one-third of participants attended at least one of the waste reduction workshops offered during the program.

Overall, *HOW* appears to have had an impact on household attitudes and behaviours. The positive aspects identified above are reflected in the 93% of survey respondents who were satisfied or very satisfied with their *HOW* program experience. Additionally, while not an objective, the *HOW* program has led to a community of interest forming among participants around waste reduction.

Interesting, despite waste to landfill decreasing for participating households, food waste actually increased by 5% by weight per household per week (equivalent to approximately 3.5 apples per week), demonstrated through the pre and post household garbage bin audit. This is also in contrast to what many of the participants reported in the final survey (where 60% stated that they have reduced their food waste by 51% or more), indicating the potential for a self-reporting bias.

The completion of the *HOW* program now represents an opportunity for Council to capitalise on a significant amount of positive momentum and goodwill towards waste reduction in the community.



Frankston's Specialty Recycling Hubs where residents can recycle items that can't be placed in the kerbside recycling bin

Evaluation of HOW

The *HOW* program was independently evaluated at three different stages: pre-program, midway and at the close of the program. Household's kerbside waste data was also independently audited, before the program, midway and again at the end of the program.

As a result, both qualitative and quantitative information from the program was obtained, to address any potential for biases in self-reporting. As the majority of similar programs are self-reported, the results of this independently gathered information will be beneficial for other projects when establishing evaluation methodology and realistic targets.

Stage one evaluation was done at the beginning of the program, identifying the barriers for households around composting and waste reduction behaviours. It identified what key messages and incentives would encourage the target audience to reduce waste. The information for stage one was found in:

- Literature review
- Online survey
- Two focus groups
- Household garbage bin audit (from a sample of 100 participating households)

Stage two was performed mid-way through the program and identified the emerging barriers to effective behaviour change and what could be put in place to address these barriers. It also identified which parts of the program were working well. The information to inform this part of the evaluation was found in:

- Online survey
- Household garbage bin audit (from a sample of 100 participating households)

Stage three of the evaluation addressed how effective the overall program had been and recommendations for future projects. The following was done for stage three:

- Online survey
- Three focus groups
- Household garbage bin audit (from the sample of 100 participating households)
- A quantitative and qualitative analysis of all available data

Both a Success and a Future Consideration

The initial target of participants being able to reduce waste materials by 50% was well meaning, but ambitious. Behaviour change takes time, dedication and support. At the completion of the *HOW* program, the weight of the average participant's kerbside garbage bin had reduced by 13%. This is a very good outcome and a good stepping stone towards reducing waste by 50%.

It can be assumed that if participants reduced their waste by 13% in 12 months, that they would potentially achieve 50% in an additional three to four years. This indicates a strong amount of momentum.



Considerations for Future Programs

Initially, to join the *HOW* program, participants were asked to switch from a weekly kerbside garbage collection to a fortnightly collection, which resulted in a very low uptake of households signing up. To reach the target of 1,000 participants, the program had to be redesigned to make it more appealing to households.

Initial advertising of a “free compost bin” or a “subsidised worm farm” also appears to have attracted some people not interested in the overall aim of the program, but instead who were looking for a ‘free’ compost bin. This was despite criteria being developed in the recruitment phase to assess the motivation and willingness of potential participants to commit to reducing their waste.

Over 3,000 expressions of interests were generated from the municipal wide mail-out which resulted in a very large amount of administrative work. In addition, possible participants were asked to fill in an expression of interest survey. Once selected for the program they were then sent a follow up survey on their household waste behaviours. It was difficult to get participants to complete the second survey. For future programs, one succinct survey with up-front selection criteria is recommended to reduce administration time.

Focus groups conducted with the participants found that many participants were already composting or taking actions to reduce waste before the program, despite this being part of Council’s selection criteria. They regarded the *HOW* program as an additional support system. This highlights the difficulties in targeting people who aren’t already environmentally conscious.

Despite the enthusiasm, active engagement and overall high level of satisfaction expressed from participants about the program, the auditor’s results did not see a reduction in food waste. Audits showed that food waste had increased by about the equivalent of three apples per week on average for each household. This demonstrates that food waste is a complex issue and is intrinsically linked with lifestyle, food production and distribution and the Australian economy. It’s unclear why food waste didn’t reduce in participating households. For future programs, a compositional food waste analysis of participating household bins is recommended, for pre, mid and post program.

A final survey completed by 238 participants showed that 11% felt they had reduced their overall waste between 41-50%, 16% felt they had reduced their overall waste by 51-60% and 9% by 81-90%. This shows a potential for self-reporting bias, as we know from the waste audits there was an overall waste reduction of 13%. It highlights that people may have different perceptions of how much waste they have reduced.

It also brings attention to the type of reporting data for these types of programs. If more waste reduction projects were independently evaluated/ audited using garbage bin audits, there could be very different outcomes. However, as the households who were audited were not necessarily the same who completed the surveys, it is not unreasonable to expect some disparity between the waste audit data and participants self-reporting.

Conclusion

Overall, the *HOW* program was successful in raising waste reduction awareness within the Frankston City community. Participating households reduced overall waste by 13% and households are now on the way to halving their waste.

Participating households and schools enjoyed the program and continue to make changes to their waste reduction behaviours, with many stating that they will continue on their waste journey.

The *HOW* program highlights that for future programs, realistic targets need to be based on information from objective data collection and waste bin audits of participating households. It also raises the awareness of the complexities of trying to measure long-term behaviour change in set time-frames and the difficulty in tackling food waste reduction.

These results also imply that moving forward, programs such as *HOW* should focus on overall waste reduction, rather than the main focus on food waste reduction, in order to provide value for money.

Frankston City Council will continue to support the *HOW* participants with its *HOW* online e-newsletters, the *HOW* Facebook group and by continuing to run waste reduction workshops for the entire community.

Council would also like to thank the Victorian Government, who through the Metropolitan Local Government Waste and Recovery Resource Fund, managed by the Metropolitan Waste and Resource Recovery Group, made this project possible.

Hint: **Bananas**

Bananas placed next to other fruits cause accelerated ripening, as they emit a lot of ethylene. Take advantage of this by putting unripe fruit that you want to eat in a paper bag with a banana. On the flip side, be careful about keeping ripe bananas in your fruit bowl as they will cause the other fruit to go off more quickly.



A few of *HOW* participants' comments:

"It has been a fantastic program that has developed and increased my knowledge and subsequently the information I am teaching my children. My children have become involved in the whole gardening cycle from composting to growing vegetables and back again! The children have also become involved and actually love recycling! And as a result of all the above we have significantly cut our waste to landfill which we are proud of. Thanks!!!"

"Just that this is an awesome program that I hope the council continues to deliver. I have educated many friends and work mates about composting and recycling so much so that some of them have decided to sign up as well."

“Keep up the amazing work of making our area clean and on the cutting edge of community involvement. You are doing a fantastic job, thank you.”

“Thank you for creating this initiative. My children and I are much more conscious of what we do with our waste and we are enjoying learning about how to create 'good' compost.”

“Love it and I like the Facebook page - great source of information. I also like the Information Folder :)”

“Fabulous initiative! I am so grateful for the ongoing support and education. Well done!!!”

“It made us more aware of how to dispose of our waste.”

“Spread the word! A good and worthwhile program.”

“We didn't realise how much of a difference just composting food scraps makes to our general waste.”

“I hope this program continues, it has made a positive impact on our lifestyle. I would like to attend more workshops and I hope they continue to be at suitable times for my family to attend. We have learnt so much, thank you for offering this program!”

“I have loved being part of the HOW program. It has been very educational and I have also enjoyed the workshops.”

“Worm farm is going great.”

Further information

Frankston City Council

Phone: 1300 322 322

Web: frankston.vic.gov.au

HOW Tools – see frankston.vic.gov.au