

# Review of the Waterline Service

**Allan Dale is just  
a phone call  
away**





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## **REVIEW OF THE WATERLINE SERVICE**

**Prepared for Tauranga District Council**

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## REVIEW OF THE WATERLINE SERVICE

### 1 INTRODUCTION

The Waterline service is designed to promote the efficient use of water by providing a range of advisory and support services to households and businesses, a schools water education programme, and through improvements in system efficiency. Over the last two years the programme has responded to over 1400 inquiries, undertaken over 1300 home visits, delivered water education to over 8400 students in 20 separate schools, and undertaken a range of flow testing, leak detection, audits, and inspection operations.

Based on the theme “*Our Water. Let’s make every drop count*” the Waterline programme has been promoted through a range of channels including press, radio, a schools programme, Council publications, addresses to service groups, cinema advertising, displays, and the distribution of fridge magnets. A van was also purchased for the domestic advisor and a distinctive livery applied.

A strategic review of future communications options has been undertaken in the light of:

- the effectiveness of the various channels used to date undertaken;
- an analysis of the nature and source of inquiries; and
- an assessment of the information which must be communicated related to water over the next three years.

This review has concluded that a website should be developed to complement the strong personal networks approach which underpins the work of the advisors and the schools programme. Along with the Waterline materials related to water efficiency the site should also cover the current assets, system status, future developments (including universal metering), and billing. As such, the site will be a convenient medium for distributing information on a wide range of water-related matters. Preparation of materials for the website can also be the basis for other media such as pamphlets, advertisements and presentations all using a common core of graphics and text.

### 2 WATERLINE COMMUNICATIONS STRATEGY

#### 2.1 Design issues

The communications strategy for Waterline was based on three key precepts:

- (1) it was recognised the experience of most “public good” programmes (such as energy and water conservation) require a comprehensive approach for best effect. It is widely appreciated that information programmes *per se* tend to have little or no enduring effect. People can become very articulate in the language of conservation, can develop strong pro-conservation attitudes, and

can even express the intention to conserve to interviewers when they are polled, and yet still not change their behaviour. To bridge the gap between intention to act in a particular way and actually doing something requires an appropriate level of support for the change in behaviour. In the water field this can be provided directly, through incentive programmes (for such items as dual flush toilets and low flow showerheads) and personal assistance (such as fixing leaking taps) or indirectly by a range of complementary measures which reinforce individual actions, such as leak detection projects;

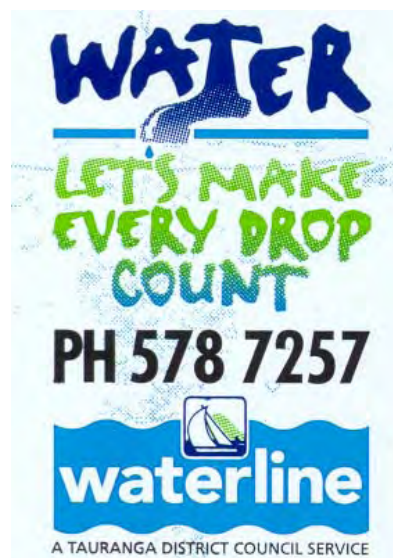
- (2) it is important to present efficiency as a positive not a negative concept. Conservation has unfortunate associations of “*doing without*” which do not mesh well with the broader consumption drivers of modern western society and should be avoided except for extreme situations; and
- (3) a variety of channels are required to reach different segments of the community which can be broadly divided between industrial/ commercial, and domestic consumers with the latter subdivided on the basis of lifecycle stage.

## 2.2 Implementation

The Waterline programme has responded to the challenges of the design issues in the following ways:

- (1) two advisors, one for domestic and the other for the commercial sectors have been employed to provide direct support to consumers;
- (2) a wide range of information channels to the community have been used including press, radio, a schools programme, Council publications, addresses to service groups, cinema advertising, displays, and the distribution of fridge magnets;
- (3) the programme has adopted the theme “*Water. Let’s make every drop count*” as a positive, inclusive message, Figure 1. Materials targeting the general consumer have avoided resort to discussions about global water shortages and similar rhetoric used in water conservation programmes elsewhere. The focus instead has been on practical information to improve the efficiency of water use;

Figure 1 Waterline logo and theme



- (4) there has been a strong emphasis on personal contacts and practical actions both through the work of the Council's advisors and the schools programme. These personal contacts have been promoted in a number of ways including:
- addresses to service clubs;
  - the painting of the domestic adviser's van in a distinctive livery which has encouraged people to approach the advisor in the street, Figure 2; and
  - displays at "expos" and other shows.

The schools programme provides an important route for information into homes with school-age children and also includes a range of tasks for the students to undertake (under parental supervision) in their homes.

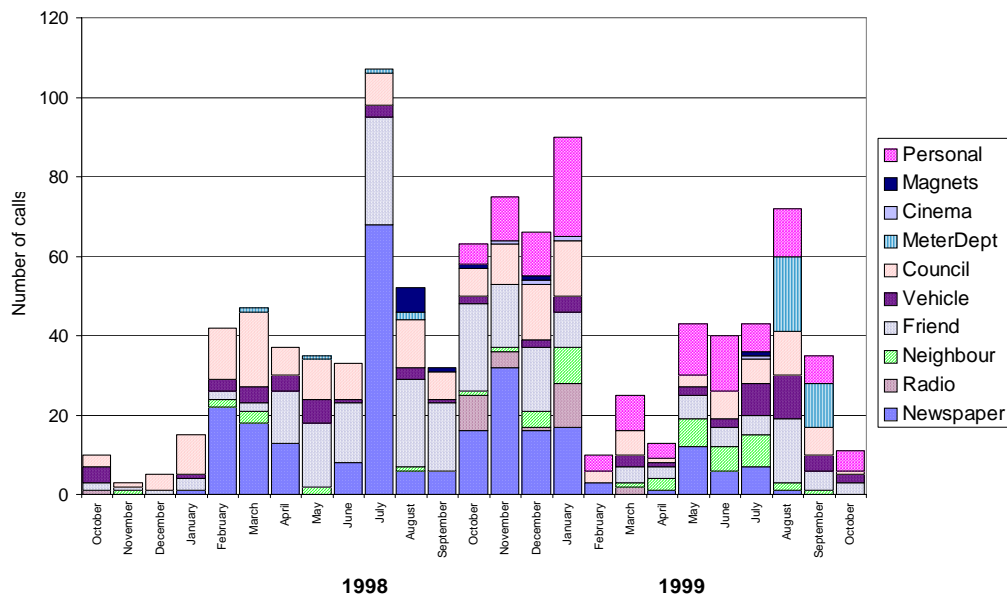
Figure 2 Domestic advisor Allan Dale with his van



### 3 ANALYSIS OF COMMUNITY CONTACTS

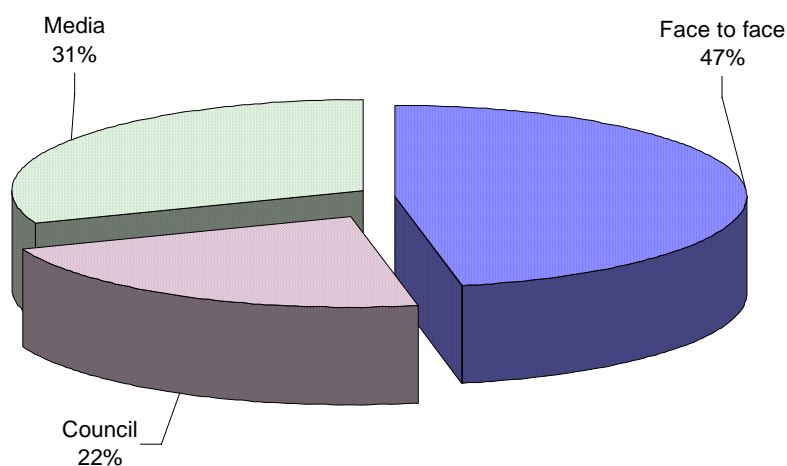
Since October 1997 there have been a total of 1413 calls logged to the Waterline advisors. The source of the referral to the Waterline over this period of almost two years has varied as different channels have been tested. Underpinning the promotion has been a programme of testing the effectiveness of various channels in generating calls to the Waterline phone number. This has included cinema advertising, radio, and the distribution of fridge magnets as well as the more conventional newspaper advertising and editorial.

Figure 3 Call frequency by source of referral since October 1997



The impact of the information in the July 1998 release of “*Smart Buys*” is clearly apparent, as is the on-going contributions of referrals through the Council, and the Waterline vehicle. Since October 1998, the presentations to service groups have become a significant source of business generating 21% of all calls in the first 12 months of their delivery. Together with referrals from friends (a consistent and significant source throughout the period) and neighbours and approaches to the domestic adviser when in his vehicle, these face-to-face contacts make up almost half of the sources of the calls, Figure 4.<sup>1</sup>

Figure 4 Summary of source of referrals



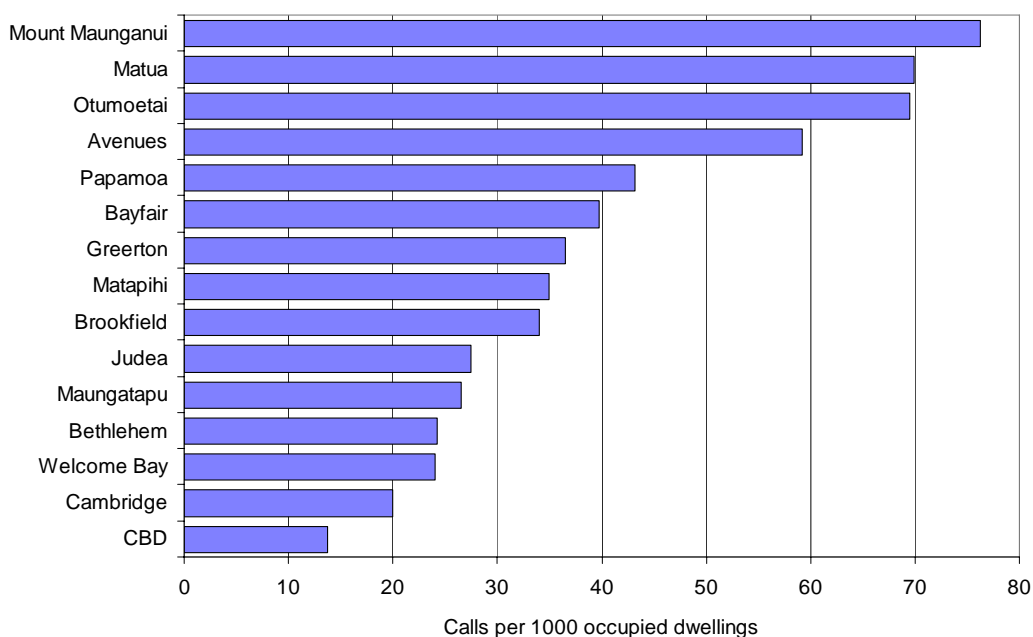
<sup>1</sup> There was a downturn in calls in February-April 1998 when the domestic adviser was unavailable for home visits and inquiries were dealt with by the Council inquiries desk. The domestic adviser has now trained the help line staff to deal with routine inquiries.

In summary, the experience to date shows that:

- face-to-face communication either directly (through talks to service clubs, manned displays, and the Waterline vehicle) or indirectly (referrals from friends or neighbours) has a significant and sustained effect;
- materials in one-off publication like the Community Diary are useful stimuli with relatively short-term impact;
- newspaper articles produce better responses than advertisements;
- other media such as radio have had modest impact while cinema advertising generated only 10 calls in the whole period despite running on three screen for six months and one screen for a further six months;
- the distribution of fridge magnets produced only a minimal response (10 calls from 1800 delivered in Matua). However, fridge magnets are seen as a useful reinforcement for people who have been visited.

The call rates have varied quite significantly between suburbs with some recording calling rates per 1000 dwelling three or more times higher than others, Figure 5.

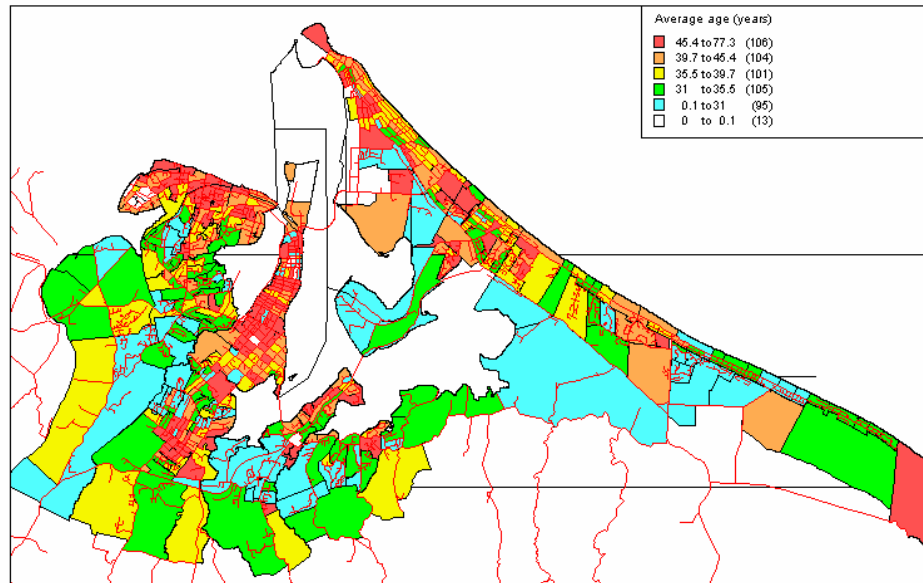
Figure 5 Call rates by suburb



The highest rate of calls has been from Mount Maunganui followed reasonably closely by Matua, Otumoetai, and the Avenues. In general terms these are all older suburbs with a higher average age of resident than the rest of the District, Figure 6. Matua and Otumoetai are also broadly among the more affluent of the suburbs in the District.



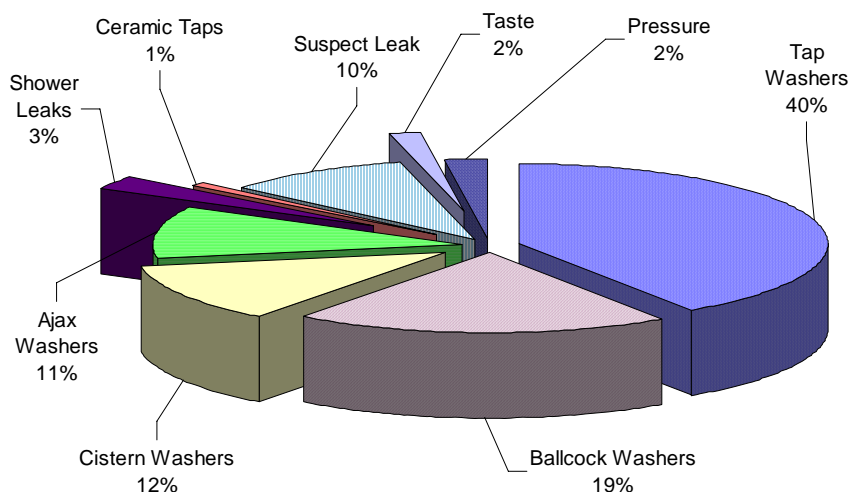
Figure 6 Average age of residents by mesh block 1996 Census



The programme has used the offer of tap washer replacement (on conventional taps) as an inducement to householders. The ensuing house visit is then an opportunity for the domestic adviser to review water use in the home, to undertake an inspection of the property to identify leaks or other losses, and to discuss ways to use water efficiently.

Some support for the appropriateness of the inducement is evident in Figure 7. Tap washers were the stimulus for 40% of the calls.

Figure 7 Subject of the calls



#### 4 SCHOOLS PROGRAMME

The schools programme targets mainly Forms 6-9. The programme has been delivered in 26 separate schools with 23 programmes delivered in 1998 and 1999 (20 schools were visited both years), Table 1. Most schools have already booked again for next year as well as some new schools have booked for the first time.

Table 1 Schools participating in the programme

School	1998 Classes	1999 Classes
Bethlehem Primary	1	1
Omanu Primary	5	5
Tauranga Primary	6	6
Brookfield Primary	4	4
Bellevue Primary	5	5
Merivale Primary	2	2
Maungatapu Primary	4	4
Greerton Primary	4	4
Matua Primary	5	5
Greenpark Primary	6	6
Tauranga South Primary	4	4
Tauriko Primary	3	3
St Marys	4	4
Arataki Primary	6	6
Seventh Day Adventist	2	1
Mount Primary	5	
Matapihi Primary	1	
Otumoetai Primary	4	1
Otumoetai Intermediate	10	11
Otumoetai College	10	10
Tahatai Primary	5	3
Tauranga Intermediate	35	35
Bethlehem College	3	3
Welcome Bay Primary	5	
Selwyn Ridge Primary	4	
Papamoa Primary		5
Pillans Point Primary		4
Mount Intermediate		20
	143	152

A total 8410 pupils have taken part in the programme, 3840 in 1998 and 4570 in 1999.

The programme a range of information about the water cycle, water supply and use. It combines this with a range of practical actions to improve water efficiency in the

home. Some classes report 50% of the pupils changed tap washers under adult supervision.

## 5 SYSTEM EFFICIENCY PROGRAMME

The improvement of system efficiency through the reduction of losses is an essential complement to measure to improve the efficiency of the end use of water. There are three main elements to the programme:

- flow testing
- on-going maintenance;
- leak detection;
- property audits; and
- backflow/cross connection

Figure 8 Leak detection trailer



### 5.1 Flow testing

Seventeen zones have been flow tested, encompassing about 60% of the District, have been flow tested over the last winter. This work is now stopped due to the increasing demand on the reticulation. Within the 17 zones the overall loss has not been determined at this stage and this will not be done until the whole district has been completed by end June 2000. Leakage rates within those zone are typically in the range 10-15%. It is anticipated that a further 10 zones will have to be identified and measured to complete the District.

## 5.2 On going maintenance

In the course of the flow testing program the opportunity is also taken to inspect and maintain the valve system.<sup>2</sup> Each valve within a particular zone is identified and operated to ensure that it is in working order. While very time consuming, this process is essential to the success of the program. It has the added benefits that any closed valves are identified and block plans are confirmed for accuracy.

## 5.3 Leak Detection.

Regular calls are made leaks detection on private properties. Contractors and local plumbers have all used the service which, overall, reduces the cost of the repair and reduces the amount of loss in the system because the leak can be found sooner.

To date, leaks have been pinpointed in about 20 of the 30 call-outs. One major loss of 80 l/minute was found on a cracked 50mm asbestos rider, and another of 400 l/minute was located in a private property with a 400m long line (this was noticed during plumbing work when the meter was spinning but there were no taps open!).

## 5.4 Audits

A programme of audits is underway, mainly in the schools, and club premises. Two recent audits identified savings of 10m<sup>3</sup>/day and 18m<sup>3</sup>/day could be made with the installation of urinal controllers. Some property owners have subsequently installed these devices.

## 5.5 Backflow / Cross connection.

Council carried out a District wide survey three years ago and the main focus of the work since then has been to follow up with the owners of the properties to have backflow devices installed appropriate to the hazard. A re-survey of the District will begin shortly to identify changes and/or additions which will be done in advance of the meter installation project.

Inspections have also been carried out of residential properties built recently to ensure that their connection conforms to our code and where it is found that they do not, letters are sent asking them to address. It is essential that this work is done before the meter installation contract proceeds.

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<sup>2</sup> This systematic approach replaces previous practice which tended to be more informal in which valve system maintenance was more on a 'If it leaks, fix it' basis.

## 6 ANALYSIS

### 6.1 The existing programme

The Waterline programme is designed to promote efficient water use based on positive promotions, practical assistance, education and supply system improvements. It represents a direct action by the Council to meet its obligations under the Resource Management Act in terms of the sustainable management of water resources.

To date the programme has run much as envisaged. In terms of the information and assistance elements of the programme, some lessons have been learned in terms of the channels used, in particular the disappointing response to the cinema advertising and to a lesser extent to radio. Most encouraging in terms of the calls to the Waterline has been the significant number of referrals from friends or neighbours (almost one third (32%) of all calls). This provides a direct and positive indication that the services are valued by the recipients.

The analysis of the suburbs from which calls have been received reveals some areas in which there are opportunities for further development and promotion. While the schools programme is undoubtedly reaching into homes with intermediate age school children this may not compensate for the under-representation in the calls of a number of the newer suburbs around the District. One possibility here is to specifically target young families through the pre-school facilities.

No significant changes of emphasis are recommended at this stage for the information and assistance component of the programme. Careful consideration will, however, need to be given to the resourcing of this element as an upsurge in demand can be anticipated as the metering programme gets underway. A significant surge in demand can be expected when the first "dummy" bills are sent out showing people currently paying by UAC what they are actually using for the first time.

The schools programme is currently performing a useful role both within the schools and as an important channel into homes with children. The direct involvement of the children in water efficiency actions, such as changing tap washers at home, will also yield (as yet unquantified) water saving.

The system efficiency programme has already yielded a number of benefits in terms of water losses in commercial properties. The full benefits of the programme in terms of targeting future improvements to the network, however, will not be realised until the flow testing and survey work is completed.

## 6.2 New developments

### 6.2.1 Web site

Up till now the development of the Waterline programme has largely stood apart from other aspects of the water supply system. This has been deliberate in that there has been some controversy related to:

- the rebuilding of the Joyce Road treatment plant using state-of-the-art microfiltration technology; and
- the introduction of universal metering for charging for water in place of the inequitable dual charging system inherited from pre-amalgamation days.

Both the Joyce Road upgrade and water metering issues have now been resolved. It is therefore appropriate to set the Waterline service in the broader context of the overall water supply system, while still retaining its distinctive branding. By doing so, Council will be in a position to present an integrated view of the water supply system which covers:

- Council water supply assets;
- current system status including production at the two treatment plants, reservoir levels, consumption, and water quality test records;
- new developments including the upgrade of the Oropi Road treatment plant, new reservoir construction and reticulation upgrades (both in terms of planning and notification of works);
- water charges, including the format new bills (as yet to be designed);
- the Waterline programme covering information and support services, the schools programme and leak detection;
- the progress of the metering programme;
- press releases on water matters;
- technical reports on water matters (made available as PDF files)<sup>3</sup>; and
- the (as yet to be developed) customer charter.

The most appropriate medium in which to organise this range of material is electronic. The development of a website for water services will fill a communications gap in that up till now there has been no convenient source of information for the community on the status and development of the water supply system. It will also provide the Council with a channel which is both available 24 hours a day and un-mediated. The Council will therefore not be dependent on others to accurately report on water supply issues in an informed and independent manner in that it will be able to present up-to-date, factual information directly to the community.

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<sup>3</sup> The Adobe Portable Document Format files provide a universal format for document distribution as the reader (Adobe Acrobat) is available at no cost from [www.adobe.com](http://www.adobe.com).

The preparation of information for the website will also provide a pool of resources for other communications such as pamphlets and reports (the only limitation is that higher resolution graphics will be required for other media than will be used on the website).

### 6.2.2 Mobile display

Another initiative which could prove a useful extension of the “face-to-face” aspect of the promotion would be a mobile display. A converted bus would probably be the most appropriate style of vehicle avoiding the need for a towing vehicle every time the display need to be re-positioned which would be necessary with a caravan. This bus could be taken to shopping centres, shows and other venues to provide information and demonstrations. Such a mobile display would also be a very useful adjunct to the schools programme.

The vehicle would be painted up in the Waterline livery using the same motifs as the domestic adviser’s van and could include:

- a short video;
- displays related to leak detection, meter reading, and locating a toby;
- water efficiency devices such as low flow showerheads;
- a meter to show how to read it;
- taps so that people can try changing washers;
- toilet cistern to show washers and how to change them; and
- other water efficiency information including pamphlets.

One of the most useful uses for the business would be when meter installation gets underway. At this stage people will be sensitised to the chance to measure their water use for the first time and to identify opportunities to improve the efficiency with which they use it. Parking the vehicle in localities where meters have been installed would provide a very useful opportunity for outreach to the community.

## 7 CONCLUSIONS AND RECOMMENDATIONS

The Waterline programme is working well. All three elements have generated some measurable benefits although the sensitivity of the water issue and the absence of meters in two thirds of homes means that systematic monitoring of the outcomes is not possible.

The basic approach and methods of the programme have been validated and a range of information channels tested. It is recommended that the programme be continued and extended by the development of a web site and the acquisition of a library bus to be converted into a mobile display.

**WATER**

**LET'S MAKE  
EVERY DROP  
COUNT**

**PH 578 7257**



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