

Mt Evelyn Rainwater Tank & Stormwater Survey

Survey Results



This booklet summarises the results of a survey that we conducted at the end of 2007, asking Mt Evelyn residents and landholders about their awareness of and attitudes towards water conservation and stormwater. The survey is the first step in an exciting research project, that will improve the health of Little Stringybark Creek and reduce the local community's reliance on tap water.

The response to the survey was great. Thanks very much to all of you who took the time to answer our questions. It is very encouraging to see so many people of the Mt Evelyn community interested in water and their local environment. To those of you living in the Little Stringybark Creek catchment, we will be contacting you again soon with information about how you can participate in the next stage of the project, the "**Stormwater Tender**".

We have outlined the main points of interest from the survey on the opposite page, and for those wanting more information, we have summarised responses to individual questions, and added some explanations and clarifications in the rest of the booklet.

Keep an eye out for news on the **Stormwater Tender** project, coming soon.

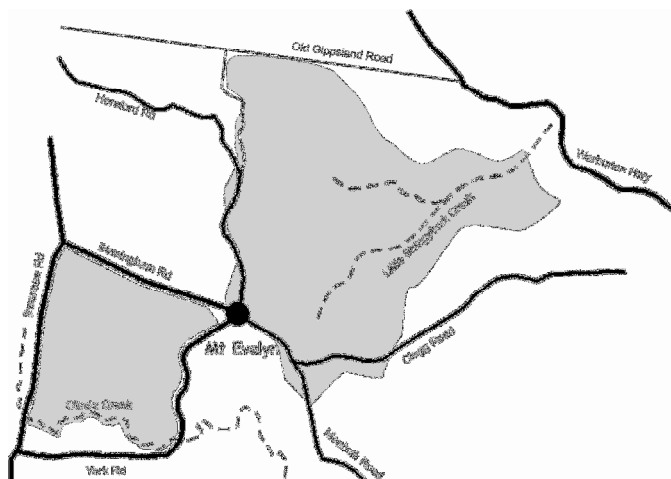
Yours sincerely,



Associate Professor Chris Walsh
The University of Melbourne



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Summary

Most people in the Mount Evelyn community are concerned with how much tap (potable) water they are using. Most households are taking practical actions to reduce water use and want to do more.

Most people were reasonably aware of stormwater, have a sound knowledge of the sources of stormwater and often think about how stormwater is managed.

However, fewer people were aware that current stormwater drainage practices (as found in Mt Evelyn, and most of the rest of Melbourne) are having a severe impact on the health of their local creek.

Most people surveyed undervalued the role individual members of the community can play in managing stormwater. Private property owners can make a substantial contribution to reducing the negative impacts of stormwater—by keeping as much as possible on their property and using it. This can also help to save water.

Most people surveyed care about the state of their local creeks and are keen to see the health of local creeks improved.

But fewer fully understood the reasons for poor creek health in the local area. Stormwater is the single, largest problem for creeks in the Mt Evelyn (and the greater Melbourne metropolitan area).

Introduction

- In late 2007, 1850 households in Mt Evelyn were asked to participate in a survey on rainwater tanks and stormwater.
- The response rate to the survey was very good, with 29% of households responding.
- Many respondents expressed their interest in the study being undertaken and the results of the survey. Below, we present the results of the survey for selected questions, along with some comments and clarifications.

Questions on water saving

Q3. Do you monitor how much tap water you use each year or quarterly? (535 people answered this question)

- Yes 73%
- No 27%

A number of households (8%) reported they were unaware of how to measure their water consumption. The easiest way is to look at the water bill you receive from Yarra Valley Water, which will identify and compare your rate of consumption.

Q6. What actions have you undertaken in the last 12 months in order to reduce your use of tap water? (497 people answered this question)

- Having shorter showers 89%
- Mulched the garden 73%
- Reusing our grey water 55%
- Fixed all leaking taps 51%
- Using drought tolerant plants 49%
- Installed AAA shower heads 44%
- Installed dual flush toilet(s) 35%
- Installed rainwater tanks 27%

Questions on rainwater tanks

Q8. In your opinion, are there any negative impacts associated with the installation of rainwater tanks? (531 people answered this question)

- No 69%
- Yes 22%
- Maybe 9%

Of the 22% who answered “Yes”, over a third (39%) recorded that cost was a negative impact of rainwater tanks, either for their installation and/or the running of pumps. Interestingly, 22% of those providing a comment thought that some sort of tax or charge would eventually be applied to rainwater tanks and 12% believed that the reduced flow of water to creeks after installation of rainwater tanks was bad.

Actually, a rainwater tank is one of the best ways to protect your local creek from the stormwater that runs off your property. Much more water runs off your property than before your house was there (and it runs off much more often). This is because the roof and other paved surfaces create impervious areas, which quickly generate runoff whenever it rains. Tanks help the creek by keeping a lot of that excess water out of the creek. And by sending less water off the property, tanks help to reduce the load on stormwater filtering systems down the hill (like raingardens, which we discuss below). These filtering systems are designed to clean the stormwater, and slow it down, to protect the stream from pollution and erosion.

We believe that a future tax on rainwater tanks is extremely unlikely, because we think any government would be foolish to consider a tax on householders who are reducing their impact on the environment, and are helping government-installed filtering systems to work better.

Q9. How many rainwater tanks do you have connected to structures on your property? (532 people answered this question)

- None 70%
- One 20%
- Two 6%
- Three 2%
- Four or more 2%

Of those properties that reported having one or more tanks installed, approximately half (48%) were reported as being of smaller capacity, less than 3,000 litres.

To make a real difference to the health of local creeks, as many houses in their catchments as possible need to have rainwater tanks installed. With an estimate of only 30% of the Mt Evelyn community having rainwater tanks, many more are required to produce a lasting improvement to the creeks.

Q11. What do you mostly use the water from the rainwater tank(s) for?

(162 people answered this question)

- Garden watering 90%
- Car washing 60%
- Refilling spa, pool or pond 23%
- Watering stock/animals 15%
- Flushing the toilet 14%
- Washing clothes 13%
- Drinking 4%
- All my water needs 2%
- Hot water 2%

The greatest water savings and benefit to creek health are made if tanks are connected to appliances that are used frequently, all year-round, like toilets, laundry, or hot water systems (in addition to seasonal garden watering). This increases the use of rain water and provides sufficient space in the tank to capture the next rain.

Q13. Did you receive a payment or rebate from the Victorian Government or Yarra Valley Water for the installation of the rainwater tank(s)? (158 people answered this question)

- No 92%
- Yes 7%
- Don't Know 1%

It is unfortunate that we did not ask why house holds did not apply for the Victorian Government rebate. We suspect it was due to most tanks not being connected for internal use, a requirement to receive the 'large tank' rebate. Unconnected tanks are only eligibly for a \$150 rebate, which would barely cover the cost of having them signed off by a licensed plumber (a requirement to receive the rebate). Connected tanks can receive an additional \$150, or more if they are of a certain size.

Q16. If you own or are purchasing your house, would you like to install a new or additional rainwater tank? (525 people answered this question)

- Yes 86%
- No 14%

Q19. What has prevented you from installing the tank? (445 people answered this question)

- The financial costs 85%
- Finding and deciding on a suitable location 30%
- Deciding what size or type of tank to purchase 18%
- Have not had time to organise it 15%
- It is low priority 5%

It is possible that rainwater tanks are considered expensive because they are not thought to offer a wide range of benefits to the home owner. But there are significant benefits environmentally to the installation of rainwater tanks, especially the protection of creeks. It is important to consider that the price of tap water is likely to increase in future years. Replacing the use of tap water with water from a rainwater tank may become financially more rewarding.

Q20. If you were to install rainwater tanks, what would you be most likely to use the water from the rainwater tank(s) for? (448 people answered this question)

- Garden watering 95%
- Car washing 67%
- Flushing the toilet 62%
- Washing laundry 41%
- Refilling spa, pool or pond 19%
- Watering stock/animals 16%
- Drinking 17%
- Hot water 11%

It is interesting to note that the percentage of households proposing to use rainwater for “flushing the toilet” and “washing of laundry” was much higher compared to the use of existing rainwater tanks. This is very encouraging, suggesting that people are looking to contribute further to water saving. As noted earlier, these ‘multiple uses’ from rainwater tanks will also help them to protect streams from excess flows, which cause erosion and degradation.

Q22 What are your reasons for not wanting to install a rainwater tank? (133 people answered this question)

- I believe the government will end up taxing them 20%
- I already have a rainwater tank, which is all I need 17%
- It would cost too much to install 17%
- There is no where suitable for the tank to go 15%
- Money saved will take too long to recover 12%
- I don't need the rainwater for anything 10%
- I prefer to use other water saving measures 8%
- The house is a rental or investment property 7%
- It requires too much time or is too difficult to organise 2%
- There are no buildings on my property 0%

Questions on stormwater

Q24. In your opinion, which of the following contribute to stormwater runoff?
(528 people answered this question)

- House roofs 91%
- Roads 90%
- Concrete paths 66%
- Paving 64%
- Nature strips 48%
- Grey water 17%
- Septic tanks 5%
- Don't know 2%

The correct answer is house roofs, roads, paving and concrete paths. These are 'impervious' surfaces that prevent rain from soaking into the ground or being taken up by plants. The frequent excess runoff from these surfaces is called stormwater. Because nature strips allow water to soak into the ground, they don't contribute to stormwater (except in really large storms, when runoff would have naturally occurred anyway, before urbanisation). Grey water and Septic tanks shouldn't contribute to stormwater, but in some places they can illegally drain to stormwater pipes, making stormwater an even bigger problem.

Q27. In your opinion, which of the following groups/organisations can make a contribution to improving the management of stormwater in your neighbourhood? (527 people answered this question)

- Yarra Valley Water 86%
- Shire of Yarra Ranges 84%
- Victorian Government 61%
- Private land owners 42%
- Dept. Sustainability & Environment 41%
- Melbourne Water 39%
- Australian Water Association 15%
- Green Plumbers Association 13%
- None of the above 1%

Actually, private residents and landowners can make big contributions, by managing the stormwater that runs off their properties. The Shire are responsible for the small stormwater drains on the streets and through public land. Big drains and creeks are managed by Melbourne Water. Yarra Valley Water don't manage stormwater directly, although they do collect the drainage levy as part of your water bill to fund Melbourne Water's drainage works. The others in the list can make contributions in various ways (through action or policy), but the main stormwater managers are the Shire, Melbourne Water, and you!

Q28. Are you aware that urban stormwater can have a negative impact upon the health of creeks and rivers? (530 people answered this question)

- Yes, well aware 43%
- Yes, but only vaguely 37%
- No, not at all 19%

Stormwater is actually the biggest problem for creeks and rivers flowing through Melbourne and its suburbs. Before there were houses and roads here, water drained to streams through the soils, being filtered, or taken up by plants, on the way. This meant that our creeks had a clean, steady flow of water, and it took a lot of rain (more than 25 mm) to start them rising noticeably. Water almost never got to the stream by flowing over the forest floor.

Our houses and roads produce a lot more runoff and our stormwater pipes take it (and a cocktail of pollutants it picks up on the way) straight to the stream. The creeks now get a polluted flush of water every time it rains (once every few days), and they rise after just a few mm of rain. Because of these frequent flushes of polluted stormwater, urban creeks are usually sick and eroded. Reducing stormwater runoff can help to restore our creeks!

Questions on raingardens

Q29. Prior to receiving this survey, had you ever heard the terms: (523 people answered this question)

	Yes	No
• Raingarden	16%	84%
• Biofiltration/Bioretenion systems	32%	68%
• Infiltration trench/basin	20%	80%

It is not surprising that few people have heard of the term raingarden, it is relatively new. Familiarity with the term will increase, as raingardens are a key tool in the management of urban stormwater runoff (and in creating drought-resistant gardens). While rainwater tanks are crucial to reduce the amount of water running off our properties, raingardens are crucial to make sure that the water that does runoff our properties is clean and drains slowly, through the soil, like it did before houses were there.

Q32. Would you consider installing a new or additional raingarden on your property? (530 people answered this question)

- Yes 45%
- Maybe 37%
- No 19%

It is very encouraging that although few people were aware of the role of

raingardens, most were still willing to consider installing one on their property.

Q33. What are your reasons for not wanting a raingarden installed at your house? (51 people answered this question)

- I don't think there is any need to install a raingarden 27%
- It would cost too much 25%
- It requires too much time or is too difficult to organise 18%
- I already have one installed 4%
- I don't know enough about them 0%
- There is no where suitable for the raingarden to go 0%
- I am renting this house 0%

Q35. The main reason you would like to install a raingarden, is to: (295 people answered this question)

- Create a 'no-watering' garden 37%
- Help manage my stormwater 36%
- Improve the health of local creeks 32%
- Create a new garden feature 11%

Questions on local creeks

Q39. Without consulting any other documents, do you know the name of the creek that runs through your area? (224 people answered this question)

- No 57%
- Yes 43%

The actual names were Olinda Creek, if your property was located west of Mt Evelyn Township (in area A), and Little Stringybark creek, if you were in area B (east and north of the Mt Evelyn township). The majority of respondents who said they knew the name of their creek were correct.

Q40. How would you rate the overall condition of the creek in your area? (528 people answered this question)

- Don't know 44%
- Fair 25%
- Poor 18%
- Good 12%
- Excellent 1%
- Don't care 0%

In the Regional River Health Strategy, Stringybark Creek (which includes Little Stringybark Creek) is rated as Poor, the second lowest ranking, and our monitoring has shown that Little Stringybark is in worse condition than its big brother. Olinda

Creek, is rated as being in moderate condition.

Olinda is in moderate condition because, at Mt Evelyn, it has a large catchment that is mainly forested. Little Stringybark, in contrast, has most of its headwaters in Mt Evelyn, meaning that its very beginnings are compromised by stormwater runoff. If we are to help either creek, we will have to change the way stormwater is managed, and this is particularly important for Little Stringybark Creek.

Where now for this project?

- The Little Stringybark Creek Project is working to restore the health of the Little Stringybark Creek, Mt Evelyn. It will do this by improving the management of stormwater in the creek's catchment.
- The project has two aims:
 - a) Raise the awareness of stormwater management, in particular, the negative impact stormwater can have on creeks.
 - b) Increase the amount of stormwater that is captured and treated before entering the Little Stringybark Creek.
- To encourage the capture and treatment of stormwater, financial payments will be offered to selected householders and business owners located in the project area. This process will be called **Stormwater Tender**.
- Payments will be made via a competitive tendering process being run in 2008/09 and will cover the installation of rainwater tanks or raingardens (infiltration systems).
- Properties that are eligible for the Stormwater Tender will be sent further information.
- For further details on this project, contact the Project Coordinator, Darren Bos on 8344 9248 or dbos@unimelb.edu.au.



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