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13 April 2017

Essential Services Commission  
Level 37 / 2 Lonsdale Street  
Melbourne VIC 3000

[water@esc.vic.gov.au](mailto:water@esc.vic.gov.au)

Re: Melbourne Water's Quiet Lakes Bore Flushing Tariff Proposal Draft Decision

To Whom It May Concern:

I am writing in response to the draft decision for Melbourne Water's Quiet Lakes Bore Flushing Tariff Proposal. The ballot upon which Melbourne Water bases its tariff proposal is flawed and misleading.

**Issues:**

1. In the "Pricing Proposal for Patterson Lakes Special Drainage Area" submitted by Melbourne Water to the ESC in 2014, Melbourne Water states "Patterson Lakes is a unique residential waterfront development..." (page 2)

Melbourne Water compares Patterson Lakes to other waterways; yet, the setback of houses from waterways in other residential waterfront developments and urban areas is greater than in Patterson Lakes. This closer proximity of homes to water makes the Patterson Lakes development unique.

Other waterways are not classified such that Melbourne Water is required to maintain these other waterways to secondary-contact-quality water, suitable for boating, fishing, wading, etc. This, too, makes Patterson Lakes unique.

The comparison of residential waterfront developments is analogous to comparing apples and oranges. Both are fruit, but the different characteristics of the two fruits require different cultivation, preparation and consumption.

The closer proximity of homes to the waters of the Quiet Lakes compared to other larger-setback-from-water residential waterfront developments or other waterways necessitate a **different** management plan. Therefore, comparing the Quiet Lakes to other residential waterfront developments is like comparing apples and oranges. In particular, the increased risk to human health from the exposure to hazardous toxins during blue-green algae blooms in the Quiet Lakes will have a greater impact on Quiet Lakes residents than residents in developments with larger setbacks; thus, requiring a different solution.

Despite my house being elevated in comparison to Lake Illawong and having wooden fences and glass-balustrade panels surrounding most of our rear yard, sand from the beach sometimes blows over the panels **into** my home. BGA-tainted sand and/or water spray from Lake Illawong blown into and onto my home and yard increases the health hazard risks to my family during BGA outbreaks. This is especially concerning as members of my family have respiratory illnesses.

In the case of the Quiet Lakes, it must be remembered that there is a well-documented history of numerous toxic BGA blooms.

Furthermore, it is important to bear in mind that a significant percentage of Quiet Lakes residents are vulnerable members of our community—elderly (both in the Illawong Retirement Village and in other homes), young children and people with health problems (eg: respiratory illnesses, cancer, chronic illnesses, etc). The effect of hazardous BGA toxins will be more harmful to these vulnerable residents.

2. In the Victoria Department of Environment, Land, Water and Planning's (DELWP) "Blue-Green Algae Circular 2016-17", the following is stated:
  - a. "Blue-green algae (BGA) or cyanobacteria are not true algae but are a type of bacteria... Significant levels of BGA in water bodies can affect the natural ecosystem and potentially impact on human health." (page 3)
  - b. In reference to BGA, DELWP states: "More significantly, some species produce toxins that have serious health implications for humans, animals, birds and livestock if they are consumed, INHALED or COME INTO CONTACT WITH THE SKIN" (page 3)
  - c. The objectives of the BGA coordination framework for responsible parties are:
    - i. "minimising the impact of BGA blooms on waterways, public health and safety and local amenity" (page 3)
    - ii. "investigating the likely cause of the bloom and identifying what actions to take to minimise future occurrences" (page 3)
  - d. "Local Water Managers are responsible for managing BGA blooms in their local water body. The main role of the Local Water Manager is to minimise impacts of the bloom including public health risks." (page 6)

During the course of the bore-flushing trial in which water was flushed from the bore through Lake Legana and Lake Illawong, BGA levels in these two lakes decreased to safe levels. The data reflects the improved water quality.

If you compare the water-quality results of Lakes Legana and Illawong during the bore flushing trial with those of Lake Carramar with no bore flushing, you will see that bore flushing worked to prevent BGA blooms in Lake Legana and Lake Illawong over the past five years of the bore running. In contrast, Lake Carramar, the third Quiet Lake, has been repeatedly affected by unsafe levels of **TOXIC** Blue Green Algae during the same period of the bore flushing trial.

Therefore, bore flushing of Lakes Legana and Illawong will help Melbourne Water meet its obligations to minimise the impact of BGA blooms on waterways and public health and to minimise future occurrences of BGA blooms. This core obligation of Melbourne Water is already funded by the Melbourne Metropolitan Waterways and Drainage Charge funds.

3. In the Draft Decision, the ESC states:

"Our review of the history of the flushing trials, including the Independent Review and correspondence between residents of the Quiet Lakes, Melbourne Water and other

authorities, clearly identifies bore flushing as being undertaken at the request of residents of the Quiet Lakes.” (page16)

“The Quiet Lakes bore pump has operated for over 40 years since the Quiet Lakes were constructed.” (page 16)

This is inaccurate, as Melbourne Water, **CHOSE** not to renew the bore licence and for many years no bore flushing occurred in the Quiet Lakes. During this period BGA flourished.

The bore licence for the Quiet Lakes was part of the original design of the Patterson Lakes development and was approved by the water authority at the time, Dandenong Valley Authority (DVA), as a method for “water renewal and treatment of water quality issues” in the Quiet Lakes.

Melbourne Water’s decision to significantly decrease the bore licence in 1991, without consultation of Quiet Lakes residents, fundamentally and negatively altered the functionality of the water renewal process of the Quiet Lakes.

The residents’ requests to reinstate the bore licence and the operation of the bore was a result of discussions by PLQLOR with the Hon. Peter Walsh, former Water Minister, who instructed Melbourne Water, against Melbourne Water’s will, to increase the bore and perform a bore flushing trial. This outcome is captured in the bore renewal licence application that states: ‘water renewal & treatment for water quality issues in Patterson Lakes “Quiet Lakes”’. (refer to attachment #1)

In other words, the persistent BGA blooms experienced in the Quiet Lakes; hazardous to human, flora and fauna health; lead to the request for a return to the development’s original design function of running the bore for water renewal and treatment in the Quiet Lakes. It was the residents’ concern for their health, which lead to the Hon. Peter Walsh to instruct Melbourne Water to carry out its duty of care, as the responsible Water Authority, to investigate the cause of the blooms and take action to minimise future occurrences of BGA.

Melbourne Water’s ballot question, as listed below, is misleading:

“Do you request Melbourne Water to commence bore flushing under a property owner funded arrangement and agree to pay the associated charge for the service?” (Melbourne Water Quiet Lakes Ballot on Bore Flushing, December 2015, page 8)

We residents faced a coerced choice—pay for the bore flushing and the bore operates, or Melbourne Water will turn off the bore. With a history of prolonged BGA blooms in Lake Legana and Lake Illawong during the absence of bore flushing and the positive impact of bore flushing on water quality, residents understand the need for the bore to run in the Quiet Lakes.

In reference to bore flushing, Melbourne Water acknowledged the “positive impact” on water quality in the Quiet Lakes. In essence, what this situation boils down to is that Melbourne Water recognises bore flushing improves water quality, but wants residents to pay for this preventative function despite Melbourne Water having an obligation to minimise future occurrences of BGA blooms, as detailed in the NHMRC Guidelines’ and Blue Green Algae Circular’s preventative approach to managing a healthy waterway. In particular, the NHMRC states the following:

- a. The primary aim of this document — the National Health and Medical

Research Council (NHMRC) Guidelines for Managing Risks in Recreational Water — is to protect human health. (NHMRC page 11)

- b. “The existence of a guideline value does not imply that the environmental quality should be allowed to degrade to this level. Indeed, a continuous effort should be made to ensure that recreational water environments are of the highest attainable quality.” (NHMRC, page 23)
- c. “When a guideline value is not achieved, this should be the signal to...determine whether measures should be put in place to prevent or reduce exposure under similar conditions in the future.” (NHMRB page 23)

The case of Lake Carramar’s continued BGA blooms, most recently over the last three months, and Melbourne Water’s decision to do nothing more than posts signs and notify residents **clearly** shows Melbourne Water’s intent in dealing with BGA blooms in the Quiet Lakes. It is only interested in resident-funded solutions; even though, Melbourne Water is obligated to minimise impact on public health.

- 4. The Patterson Lakes Independent Review establishes the Quiet Lakes are public drainage reserves when it stated the following:
  - a. Conclusion #4: The Quiet Lakes and Tidal Waterways are reserved for drainage and recreational functions.
  - b. Conclusion #5: Any intention in the 1973 Agreement to designate the Patterson Lakes Waterways as a private reservation was displaced by their subsequent reservation in the subdivision plans and their design and construction as public drains.
  - c. Conclusion #7: The Quiet Lakes have a public drainage function.
  - d. The Quiet Lakes were designed such that stormwater would primarily fill each lake, and that a system of interconnecting pipes and outflows would balance the water levels in each lake. This would ensure that the inter-flows of water were sufficient to maintain appropriate retention times in each water body. Retention periods (hydraulic residence times) relate to the primary anaerobic treatment function of the water body. Expressed simply, too short a period does not allow natural treatment processes to occur, and too long a period can create stagnancy and algal blooms. (pages 62-63)

On many rainy occasions, I have seen dirt and debris wash from the drains into Lake Illawong. These occurrences present as black “clouds” spreading out into the lake via the spoon drains. The debris originates from the the surrounding community and travels via street drains into the Quiet Lakes. This exemplifies the drainage function of the Quiet Lakes. Such debris has a negative effect on water quality in the Quiet Lakes.

The Quiet Lakes residents do **not** own the Quiet Lakes. We do not pay taxes for the possession of the Quiet Lakes. The Quiet Lakes are Melbourne Water assets. Quiet Lakes residents are **not the sole beneficiaries** of these lakes as the lakes have a public drainage function.

As previously discussed, bore flushing is necessary for water treatment purposes, as well as water renewal to maintain appropriate retention times to avoid stagnancy and

algal blooms. Since, the Quiet Lakes residents are not the sole beneficiaries of the Lakes, the residents should not be responsible for the cost of bore flushing to restore a healthy waterway following nutrient-rich local-storm-water inputs. This is the purpose of the Melbourne Metropolitan Waterways and Drainage Charge, which Quiet Lakes residents currently pay.

5. Melbourne Water's track record on managing BGA blooms is poor. The Quiet Lakes are known to be susceptible to BGA blooms; yet, Melbourne Water decided to not only cease water-quality testing/sampling of the Quiet Lakes on 1/7/2015, but also, change the type of testing it conducts. Last year, MW stopped testing samples of water and replaced it with "visual inspections" of the waters of the Quiet Lakes. Melbourne Water chose to downgrade to visual inspections despite its own document stating of Cyanobacteria:

"Individual cells are very small and are normally not visible in a water body."  
(Melbourne Water, June 2010, "Quiet Lakes at Patterson Lakes About blue-green algae")

Melbourne Water's visual inspections are inadequate for monitoring Quiet Lakes water quality, as evidenced by an outbreak of toxic BGA in Lake Carramar. In January 2017, a concerned Lake Carramar resident contacted the Environment Protection Authority, which tested the water and discovered toxic levels of BGA. Furthermore according to Melbourne Water's website, toxic levels of BGA were recorded in Lake Carramar in January 2017, February 2017 and March 2017.

Recommendation #4 of the PLIR states:

"Adequate through flows in Lake Carramar to be guaranteed by Melbourne Water." (PLIR page ix)

In a desktop study published in October 2014, Melbourne Water identified eight possible engineering solutions to provide flow to solve Lake Carramar's BGA problem. Melbourne Water has blatantly misled the ESC into believing that no solution exists for Lake Carramar. No work has been done to solve Lake Carramar's flow problem.

In fact, Lake Carramar's water quality is so poor, at the moment, not only is BGA bloom now clearly evident on the lake, but there have been many deaths of birds and fish in the lake.

The Dandenong Valley Authority, the previous water authority, and Melbourne Water conducted weekly Quiet Lakes water-quality testing/sampling with the results communicated to residents via the notice boards. From July 2015, Melbourne Water decided against its 2013/2014 pricing submission that water quality testing provided a regional and community benefit and ceased weekly water-quality testing altogether.

As evidenced by the BGA outbreak in Lake Carramar in January 2017, MW's "visual monitoring" for BGA does not work. BGA is often **NOT** visible; therefore, visual monitoring is not adequate in monitoring the quality of water. The NHMRC discusses sampling where known cyanobacteria is present. All of the Quiet Lakes have experienced multiple BGA outbreaks and are susceptible to more. As a result, visual monitoring is an inadequate form of water-quality monitoring.

In June 2014, Melbourne Water announced in regards to the Quiet Lakes:

“Services that are of a general or public nature, such as carp removal and water quality testing will continue to be funded out of the general Waterways and water quality testing will continue to be funded out of the general Waterways and Drainage charge.” (Melbourne Water, June 2014, “ESC Pricing Approval” page 1)

Under the precept charge, water quality testing was carried out weekly. Despite assurances from Melbourne Water that water quality testing would continue, it not only reduced the frequency of testing, even abolishing it altogether for a period of time commencing July 2015, it also changed the quality of testing from actual testing of water samples to mere visual inspections of water from the Quiet Lakes.

In essence, Melbourne Water sought and received approval from the ESC for the funding of water quality testing of the Quiet Lakes via the Waterways and Drainage Charge in its 2013/14 Price Submission, but has purposely chosen not to provide this service. Such behaviour by this water authority is both duplicitous and misleading.

Abolishing the precept rate did not mean abolishing aspects of service to the Quiet Lakes, such as weekly water quality sampling/testing, which had been previously provided by DVA and Melbourne Water up to July 2015.

Weekly water sampling is covered by the Melbourne Metropolitan Water and Drainage Charge. It is a much-needed service and should be permanently reinstated on a **year-round basis**.

6. It is worrisome that Melbourne Water is trying to sneak into the proposal the issue of turning off the bore after a “prolonged period” of BGA. There are no clear indications of the steps to be taken by MW to determine the cause of the BGA outbreaks nor the solutions to rectify the problem in order to return the water-quality to one that is non-hazardous. There is also no indication that Quiet Lakes residents are to be consulted on the matter.

It seems Melbourne Water would like to “wash” their hands of the responsibilities associated with the Quiet Lakes. This vague mention of turning off the bore and no mention of if and when the bore would be turned on again seem to be their first steps in achieving this goal.

Considering the close proximity of homes to the Quiet Lakes water, representatives of the Quiet Lakes residents should have input in the decision-making process of how to handle a prolonged period of BGA. BGA blooms can be caused by a variety of reasons (eg: disturbance of nutrient-rich sediments by carp, the growing volume of nutrient-rich sediments from storm-water inputs, nutrient-rich lake water from storm water inputs, etc). These contributing factors are not caused by the bore and in excessive circumstances may not be adequately resolved by the bore. Once the cause of Algal blooms has been determined, alternate actions such as carp removal and/or desilting of nutrient-rich sediments by Melbourne Water and/or the review of storm-water inputs by the City of Kingston will be required in order for Melbourne Water to continue to maintain secondary-contact-water quality. Simply turning off the bore, turns off flow leading to stagnant water which, in turn, will lead to BGA blooms. Turning off the bore should only occur, if it is established that the bore is the cause of a BGA bloom, not as a simple knee-jerk reaction to prolonged Algal blooms. Lake Illawong and Lake Legana residents need assurances that Melbourne won't place these two lakes in the same situation as Lake Carramar, where we are forced to live next to a toxic-water dump.

7. It should be noted by the ESC that the bore flushing has only just been turned off again; yet, we are now seeing a re-emergence of algae growth along the edge of Lake Illawong. Also, in the past week, my children have seen a dead bird and mouse on Lake Illawong's beach.

In conclusion, Melbourne Water is happy for the Quiet Lakes to serve a drainage function and to be polluted with drainage debris and dirty water and wants to force residents to pay to keep the Quiet Lakes clean.

Melbourne Water is "spinning" the truth about the issue before the ESC. It is trying to convince the ESC that residents want swimmable water, when in fact we want to live beside safe water. We don't want to touch BGA-toxic water, be sprayed by it nor **INHALE** it.

Moreover, Melbourne Water's refusal to carry out work to solve Lake Carramar's flow problem, despite known solutions, is another indictment of its disregard for the Quiet Lakes residents' health and its repeated inclination to mislead residents, politicians, government departments and authorities, including the ESC, about the severity of the water-quality problem.

It is shocking that Melbourne Water seems to be willing to allow this problem to be repeated in both Lake Legana and Lake Illawong, by virtue of its plans to turn off the bore in the event of prolonged BGA blooms in Lake Legana and Lake Illawong before the bore is actually determined to be the cause, amongst many possible causes, of the prolonged BGA blooms.

Where there is the potential for harm to human health, it is imperative all government departments and managing authorities do their utmost to protect human health, as is their duty of care.

Considering the variety of factual errors and misinterpretations in the Draft Decision, as well as Melbourne Water's ploy to mislead the residents and the ESC with the wording of its ballot proposal, the Draft Decision should be abandoned and a new Draft Decision should be issued by the ESC. Public health is at risk and it is important to get this matter right.

Thank you for the opportunity to comment on this issue. I look forward to receiving the outcome of this Draft Decision.

Sincerely,

Nancy Grant



# GROUNDWATER LICENCE APPLICATION FORM

Water Act 1989, Section 51, 58, 62  
Licence to take and use groundwater and to operate works.

This Groundwater Licence Application Form is to be completed by a person who has access to groundwater through a bore or well and wants to take and use the water for any purpose other than domestic and/or stock. Groundwater licences are issued for a maximum period of up to fifteen years. Before you begin completing this Form, please read the accompanying Fact Sheet and Fee Schedule. Your cheque or money order must accompany this Form.

On completing the Form, please check the details you have provided as any missing information can delay the application and incorrect information may result in the licence being revoked. Send this Form, the photocopied map showing the location of your bore(s) and your payment to Southern Rural Water, PO Box 153, Maffra 3860.

If you have any questions or concerns about your application, phone us on 1300 138 510.

Please identify if you are applying for a new groundwater licence or wanting to change or amend an existing licence.

New licence  
 Change to existing licence(s) Your existing groundwater licence number(s) 9037990  
 Increase entitlement  Renew existing licence  
 Amalgamate existing licences  Other (please specify) \_\_\_\_\_

## 1. Applicant's details (Name to appear on Licence)

PLEASE COMPLETE ONE OF THE OPTIONS BELOW. These details will be documented on your groundwater licence. If approved. If you are changing or amending your existing groundwater licence, the name(s) must be the same as those detailed on your current licence. All correspondence from us will be sent to this postal address. All parties shown must sign the declaration in Section 6 of this form.

OPTION 1:  
 1. Title: \_\_\_\_\_ Surname: \_\_\_\_\_ Given Name(s): \_\_\_\_\_  
 2. Title: \_\_\_\_\_ Surname: \_\_\_\_\_ Given Name(s): \_\_\_\_\_  
*(If more than two individual applicants please attach on a separate page)*

OR OPTION 2:  
 Company/Business/Trading Name: MELBOURNE WATER  
 Company Contact Person: TIM SEIPOLT  
 Position within Company: PROGRAM LEADER OF PRECEPT AREAS

Postal Address: PO BOX 4342 MELBOURNE, VIC, 3001  
 Street Address: \_\_\_\_\_  
 Telephone Number: 09784 6467 Mobile: 0429454 522  
 Facsimile Number: \_\_\_\_\_ Email: TIMOTHY.SEIPOLT@MELBOURNEWATER.COM.AU

## 2. Proposed use

All applicants must provide details about how the groundwater is to be used.

Domestic and/or stock  
 Urban supply  De-watering  Disposal  
 Irrigation  Dairy  Commercial  Industrial supply  
 Area to be irrigated (ha/are): \_\_\_\_\_ Type of crop: \_\_\_\_\_  
 Other (please specify) WATER RENEWAL & TREATMENT FOR WATER QUALITY ISSUES IN PATERSON LAKES "QUIET LAKES"



### 3. Bore details

To add, remove or amend existing bore details, you need to list the bore number(s) here and highlight them on your property sketch. If you don't know the exact number(s), identify them with site identifiers such as A, B, C and use these same identifiers on your sketch.

Bores to be added	Bores to be removed	Bores to be amended
Bore number _____	Bore number _____	Bore number <u>S 903 7940/1</u>
Bore number _____	Bore number _____	Bore number _____
Bore number _____	Bore number _____	Bore number _____

If you are adding a bore(s) please provide the following information. It will be detailed on the Bore Completion Report, provided by your driller. If you don't have a copy of the report, please provide as many details as you can. You will also need to complete extraction rate details. See Note 3. Remember, bore yield is the maximum volume per day that your groundwater source is capable of delivering.

Bore Construction Licence number(s) S 903 7940

Year(s) constructed (if known) 2010

Bore yield(s) (ML/day) 5 ML

Drilled bore     Spear point     Dragline hole\*     Dug well or shaft\*

Bore depth 80    \* Length and width (metres) \_\_\_\_\_

Bore casing (steel/PVC and class) \_\_\_\_\_

Bore diameter (mm)     50mm     100mm     150mm     200mm     250mm     300mm

Location Coordinates (See Note 7)     AGO 66     GOA 94     Other, please specify \_\_\_\_\_

Eastling \_\_\_\_\_    Northing \_\_\_\_\_    Zone \_\_\_\_\_

### 4. Quantity to be extracted from each bore

Please provide bore use details as well as proposed daily and annual volumes to be extracted from each bore. Two examples are provided for your reference.

- If you are applying for a new licence, you need to provide details of proposed daily and annual volumes. These can be shared between bores or allocated to an individual bore. See examples below and Note 3.
- If you are amending an existing licence, you must include the bores that are to remain on the licence as well as any new bores that are to be added.

If your application is approved, your licence will detail your bore information, as shown below.

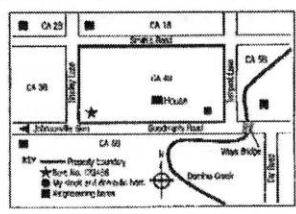
Bore number	Maximum rate (ML/day)	Maximum volume (ML/day)	Maximum volume (ML/annum)	Type of use
<b>Example 1</b> 123456	0.05	0.01	12	Daily
<b>Example 2</b> SE32112/01 GMS-999	2.00 2.00	1.00 1.00	200.0	Irrigation
<u>S903 7940/1</u>	<u>3.4</u>	<u>3.4</u>	<u>730</u>	<u>OTHER-</u>

**5. Property and location of proposed or existing bore(s)**

Please highlight the general location of the property on a photocopy of a VicRoads, Metways or CFA map. Then, using the picture at right as a guide, use different colours or symbols to identify:

- the location of all existing bore(s) on the property
- your property boundaries
- the location of neighbouring bores not owned by you.

Specific property details can be found on a Certificate of Title or Council rates notice



Property address: \_\_\_\_\_ Postcode: \_\_\_\_\_

Lot number: \_\_\_\_\_ Plan number: \_\_\_\_\_ Allotment: \_\_\_\_\_

Section: \_\_\_\_\_ Parish: \_\_\_\_\_ Volume: \_\_\_\_\_ Folio: \_\_\_\_\_

REFER BORE CONSTRUCTION REPORT

**6. Applicant's declaration**

ALL APPLICANTS LISTED IN SECTION 1 MUST SIGN THIS DECLARATION:  
 I/we, the undersigned certify that the information provided in this Groundwater Licence Application Form is true and correct.  
 I/we understand that this information may be referred to other organisations and/or advertised as part of our application and assessment process or released if reasonably required by government business, requested by lawful orders, or in the public interest - particularly in regards to the open disclosure of generally collected water entitlements.

Applicant's signature: [Signature] Date: 26/5/2010

Please print name: TIM SEIBOLT  
 AND POSITION WITHIN COMPANY IF APPLICABLE

Applicant's signature: [Signature] Date: 26/5/2010

Please print name: NATHAN ACKLAND - PROGRAM LEADER, MAINTENANCE SOUTH EAST  
 AND POSITION WITHIN COMPANY IF APPLICABLE

Remember, the person who signs on behalf of the company in Section 6 of this form, must be authorised to do so, such as a Company Secretary or Director Southern Rural Water will take no liability if this form is signed by a person who is not authorised to do so.