



20 July 2018

Port Phillip EcoCentre Submission Re: draft Healthy Waterways Strategy

Dear Melbourne Water,

The **Port Phillip EcoCentre** is a leading community-managed organisation with a dedicated team of scientists, educators and volunteers who design and implement innovative environmental programs. Our expertise is Port Phillip Bay health and the urban ecology of Greater Melbourne, within the traditional lands and waters of the Kulin Nation. We deliver specialist education, science-based research and community action projects with over 250 cross-sector partners. We are home of the **Port Phillip Baykeeper** program, an independent voice for Port Phillip Bay. The Baykeeper is part of the global Waterkeeper Alliance and we work closely with the Yarra Riverkeeper and Werribee Riverkeeper; each of us have a strong local network of waterway protectors.

Over the next three years, the EcoCentre is striving to achieve four outcomes: Connect, Act, Transform, Enable. The first three strongly align with the Healthy Waterway Strategy.

- 1. Connect** People are more connected with, value and interact with their local ecosystems.
- 2. Act** Individuals and groups take action that protects and restores their environment.
- 3. Transform** Our partnerships and networks influence positive, systemic environmental changes.

The EcoCentre commends Melbourne Water for your approach undertaken during the creation of the **Draft Healthy Waterways Strategy**, in particular:

- co-design - collaboration between the suite of community and institutional stakeholders
- scenario-planning – provision for non-static variables of climate change and urbanisation
- nested planning intervals - 10 year performance objectives within 50 year targets, and respect for the 30,000+ year context of Kulin Nation stewardship of local waterways

Specifics of collaborative implementation

We appreciate the opportunity for active involvement both through the workshop series and in making this written submission in response to the draft document. The process for co-delivery with community will be vital to the plan; the proposal for collaborative implementation currently sits outside the HWS document (ie in a Powerpoint by Dan Besley) and we urge it to be formalised as a document, given that all catchments share the performance objective: *Provide systems to share knowledge and information between communities and stakeholders; to empower communities to participate and influence waterways management.* It is useful to understand where Melbourne Water imagines

community will/must provide most significant leverage towards performance objectives. Similarly, where and how will Traditional Owners be engaged; they are primarily mentioned at the introduction to the HWS rather than, for example, specifically in key principles (11.3).

Feedback on the draft

We have identified the following set of opportunities for clarification or improvement.

1. Overall, we are concerned with the infrequent direct reference to pressures on available **potable fresh water**, in the context of climate change, population growth, un/licensed water diversions and waterway pollution. (When alternative water is mentioned on p6, it is in relation to environmental flows and not potable water. Is there an unstated assumption about the desalination plant?) Urban development like Fisherman's Bend will integrate "purple pipes" for recycled water and indeed there is great logic in ending the practice of literally flushing drinkable water down the toilet. We also note that 94% of a Melbourne household's "water footprint" comes from indirect/embodied water¹ in consumption of goods (industrial water use) and food (agricultural water use), and therefore broader shifts are required on a 50 year trajectory toward "Water Sensitive Cities" as not just design but behavior change. This gives long-term incentive for Melbourne Water to champion the CSIRO "Greener Pastures" scenario toward a closed-loop economy.
2. *Traditional Owners and waterway management, page vi* – "With almost 17,000 Aboriginal sites in our region and most within 100 metres of a waterway..." All sites in the catchment are Aboriginal. We recommend inserting the words "*registered Aboriginal Heritage*" sites.
3. *Waterways in an international city, page vii* – Additionally, iconic habitat and species contribute to Melbourne's international profile and sense of character.
4. *Environmental management, page viii* – Specify that the Sustainable Water Strategies are Victorian (i.e. not Melbourne Water). Define the term **alternative water**, both here and in the glossary.
5. *The region today, page 3, para 2* – As the sub-catchments are not divided on pure basis of hydrology, we suggest a minor phrasing alteration for clarity: "*For management purposes, these catchments are considered as 69 sub-catchments...*"
6. *2.2 Roles and Responsibilities, page 4* – It is important to acknowledge that beyond "responsibilities for key agencies," breaking business as usual will rely on structured collaboration between community and institutions. Community members hold local expertise, passion and continuous on-ground presence; institutions hold technical skill, resourcing, broader contextual data, plus legal and leadership requirements.

¹ <http://newsroom.melbourne.edu/news/clothing-food-and-electricity-impact-most-water-footprint>

7. *Survey shows Melburnians love their rivers and creeks, page 13* – This graph is difficult to interpret. Some labels seem far from their respective data points.
8. *4.1.2 Wetlands, page 14* – In addition to the natural and constructed wetlands noted, it is critical background that many inner Melbourne and coastal suburbs (Footscray, Albert Park, Elwood, parts of the CBD, etc) are built on “reclaimed” wetlands. The water future of Melbourne may be equally impacted by the wetlands *removed in the past* as those *constructed in the future*. Low elevation and gravity-based stormwater drains create inland flood risk.
9. *Amenity, page 25* – Suggested final sentence: An emerging body of research demonstrates human benefits correlated to the presence of urban parklands and waterways, their levels of ecosystem functionality and biodiversity.
10. *Vegetation extend (canopy cover), page 27* – Remove the inverted commas from indigenous species. If needed, rephrase as “locally native (indigenous) species.”
11. *Aesthetics (litter), page 27 and Litter, page 44* – **Litter is more than an aesthetic concern.** Wildlife are subject to entanglement or ingestion, including the pregnant pilot whale that had to be euthanized after washing up in Williamstown (June 2018) with a stomach full of plastic rubbish. Extensive current research is being undertaken globally (and here in Melbourne at RMIT) on the risk of plastic litter as vector for pathogens and adsorbed toxins. In 2017, scientists at Lund University found that nanoplastics can pass through the brain barrier in fish and cause brain damage.
12. *Waterway conditions for environmental values – rivers and creeks, page 31* – For flow and distinction from the prior/following sections, it possible to insert another header above the 3 sections on waterway conditions? These are key sections that are “lost” in the table of contents.
13. *4.3.1 Stormwater, page 33* – “Runoff... that enters the drainage system” still can imply (to the civilian) that stormwater will be treated before reaching a waterway. There remains public misperception that these drains go to a treatment facility. Does sufficient data exist to make a statement here about what fraction of stormwater goes to the waterways unfiltered (whether by GPT, wetland or treatment)?
14. *Para 2, “Large-scale stormwater harvesting schemes...”* – It may be appropriate to include the CRC for Water Sensitive Cities recommendation for “mosaic” interventions across public and private land. Relatedly, under *The future management of stormwater* we are keen to have the target stormwater volumes contextualized, either against the total stormwater flow across the 5 catchments (if possible) and/or within the likely capability of using open spaces vs private lands (if this has been modelled yet).
15. *4.3.2 Climate Change, page 36* – “Research suggests there have been regular droughts in Australia for thousands of years.” However, the population has never been so high, nor the landscape so hard-engineered.

16. *4.3.4 Poor Water Quality, page 40 and Untreated wastewater, page 41-42* – Is it possible to include some comment on options for levers/actions to address this?
17. *Treated wastewater, page 43* – Is there any reason that non-landscape (“purple pipe”) applications are excluded here?
18. *Trajectories approach to targets and performance objectives, page 46* – The text describes the very high waterway values as “bright green.” We suggest this is described as “dark green” (assuming we’re interpreting the legend correctly).
19. Where the target summaries in each catchment have white “no data” circles, is there any subset of these categories where Melbourne Water seeks to fill the data gap, or are they primarily gap because the data category is not applicable?
20. Where progress made with the previous strategy (2013-2018) is shown in tables, the achievements are tricky to contextualise. In future progress reports, it will be useful to see statistics “against” something, e.g. achieved vs target OR what % of the riparian/catchment land/waterway this work impacted.
21. *Dandenong catchment history, page 79* – This summary does not acknowledge the pointy end of the Bayside sub-catchment, much of which is “reclaimed swampland.” This includes Albert Park Lake and Elster Creek (notable for including 22% of Melbourne flood impacts; the new parkland / planned wetland expansion at the decommissioned golf course at Elsternwick; and the current emerging 4-municipality collaborative approach to catchment management). We believe it also encompasses the Fisherman’s Bend urban renewal, which abuts the Yarra River and is planned to become housing for 80,000 people and hold jobs for 80,000 people by 2050.
22. *10 The Bays, pages 99-100* – We note the commitment of our Port Phillip Baykeeper program to helping community understand how their local patch fits into the bigger picture. Most of Melbourne’s waterway users access both their “local” waterway and the Bay, but may not understand the ecological connection (yet). We endeavor to add value to this Strategy, to interpret and forge connections between community and institutions.
23. *11 Delivering the Strategy, page 101* – Is it possible to have an appendix with dates of the various review cycles both within the HWS and related/influencing strategies?
24. *11.2.3 Citizen Science, page 106* - There are numerous citizen science initiatives conducted within Melbourne Water as well as other organisations such as the Waterkeepers, Port Phillip EcoCentre, EPA Victoria or RMIT. Citizen Science is also emerging in Local Government management of biodiversity (e.g. City of Melbourne, City of Glen Eira, City of Bayside). It will be beneficial to address this range of citizen science leaders, then to specify (if true) that the Waterwatch and its sub-projects described here are Melbourne Water-run citizen science. We acknowledge that Citizen Science comes in a spectrum and can emphasise the citizen (educate and

engage) or the science (method rigour and data regularity). Each provides value to a subset of the waterway values. Is there a proper method to submit data to Melbourne Water for data gaps? Is it appropriate to mention here that Citizen Science complements Melbourne Water's range of formal scientific research and cross reference section 12.4?

25. *11.3.2 Advocacy, page 109-110* – Another valuable advocacy principle is to balance place-based solutions with ecosystem scale context.
26. *11.3.3 Enforcement, page 110* – Dot point 3 implies that action/reporting will not always be taken when illegalities come to the attention of Melbourne Water. Is this true? If so, please provide an example and rationale.
27. *11.3.7 Habitat management, page 111-112* – It is our belief that 600 species of native animals underestimates the species on record in the catchment(s), and that additional species may be recorded in meticulous format by local naturalists yet never entered into formats that are accessible by land and water managers. We suggest that two additional key principles should be:
 - a. Work toward formal capture of community naturalist data, where appropriate.
 - b. Align with Victoria's Biodiversity 2037 Strategy where appropriate, including environmental accounting principles.
28. *11.3.10 Diversions management, page 113* – Will there be a principle or action to formally map and transition unlicensed water diversions onto licenses?
29. *12.2 Evaluation, page 115-116* – A sixth dimension of evaluation might be Synergy: how well does this plan content and management process leverage collaboration?
30. *12.4 Knowledge gaps and research, page 117* – How does respect of, learning from and co-management with Traditional Owners relate to this section? How might citizen scientists fit into the key research areas (12.4.3) if at all? How will emerging knowledge in the Waterways and Wetlands Research Program be broadly shared?
31. *13 Glossary, page 125-129*
 - a. Catchment – In Port Phillip and Westernport region there are five catchments managed by Melbourne Water (with a small section of the Bellarine Peninsula land draining to Port Phillip but managed by another authority).
 - b. Add “diversion” and note licensed/unlicensed distinction.
 - c. Microplastics – The phrase “by-products from and blasting with microplastic particles” is unclear to the reader.
32. *Appendix 2, Roles and Responsibilities, page 134-135*
 - a. Please add Vic Roads.
 - b. Should Clearwater be added here? They are specified on page 106.

- c. Community Groups and individuals also: provide avenues for wider community engagement, share local knowledge, provide on-ground presence (ie for citizen science or reporting pollution events).
- d. It would be excellent to indicate the planned HWS catchment collaborative implementation model here, as specifically as can be agreed at this level.

Please do not hesitate to contact us for clarification regarding any of the above feedback. We look forward to fostering community stewardship for flourishing waterways now and into the future.

Sincerely,



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