

## Healthy Waterways Strategy Question and Answers

Thursday, 21<sup>st</sup> May 2020

- 1. Are the targets aspirational or absolute. Working on many subdivisions, large and small, using both large harvesting and distributed methods we are not seeing much greater than 10-15% of targets being met. Without fundamental changes in the approval and density of land zoning, I am not finding a way to meet the targets?**

I think it was pretty clear that we used the best available information at hand (local rainfall pattern, modelling based on past data, zonation benefit from actions score s) and we demonstrated that we didn't attempt to set these targets against ALL new development (instead focussing on what seemed best benefit for buck). So they are as absolute as any other previously developed BPEM guidelines at least. Yes we agree and spoke about the need for many mechanisms to be coordinated to support the implementation of these targets to be achieved. Yes the targets are currently difficult to achieve but at a minimum the role that stormwater volume plays in the degradation of streams becomes clear for the government and community to see.

- 2. Why lose them ? Surely there is a way to work with them to maintain a natural environmental presence. A way new developments could include them in design. "Them" refers to the waterways Sharyn Roskakesh mentioned when saying they would be losing a significant number due to development in Melbourne to meet the 8million capacity by 2051.**

If current guidelines (BPEM) were the only requirement then there is clear evidence that waterways that are about to be 'urbanised' will degrade. These targets are an attempt to do exactly what you are suggesting – to come up with new ways development can include them in design – AND potentially provide local fit-for-purpose water.

- 3. What tool used for cost benefit analysis? and also environmental impact assessment?**

The tool used for cost benefit analysis was a combination of Zonation (costs of works were integrated into this tool) balanced with some pragmatic decision making. The tool used for assessing environmental impact was the Habitat suitability models that clearly showed that increased imperviousness (and loss of riparian cover) leads to degradation of waterways

- 4. I've never seen so many people using our waterways as they have in the last few months - it's so great to see. I would imagine that health and wellbeing is linked to waterways more than ever. Have you considered how COVID has enhanced the profile of waterways or how it can accelerated change? Are you collecting any social data?**

Unfortunately I am not aware of any significant social research that was kicked off at the time of COVID lockdown (however this is not entirely our area) but we have been doing some sampling around particular projects to look more at the change in impact to waterways that is occurring as a result of businesses being shut down temporarily.

**5. Is credit given for evaporation e.g. from wetlands?**

MUSIC currently models evaporation from wetlands and at this stage we would allow it to be counted towards the flow target. It would be great to see some wetlands designed to promote infiltration as well – rather than lining them with clay.

**6. Could you please explain why no harvesting and infiltration targets for Dandenong Creek?**

There actually targets for stormwater harvesting set for areas in the Dandenong Ranges foothills to protect remnant platypus populations and threatened macroinvertebrates – these areas require treating both new and existing development. The Dandenong catchment is already highly urbanised and is not set for major increases via urban growth. Whilst the 10 year target for harvesting and infiltration doesn't prioritise large areas of this catchment, the long term target would be to see higher stormwater standards applied to urban renewal projects for an end goal of 25% improvement over the long term.

**7. Question for Sharyn: wondering if any work has been completed on re-establishment of flow requirements for specific target aquatic species that we are trying to protect, rather than setting targets based on comparison to predicted baseline flows? Is there a significant difference between the two approaches?**

Alongside the stormwater targets in the Strategy there were also targets set for recovery of flow back into flow stressed systems (ie where there has been over extraction). These targets were established using an acknowledged flow stress ranking methodology based on current condition so are likely to pick up on the requirements of a range of species. Having said that, consideration of the flow needs of threatened or target species such as Yarra Pygmy Perch and Grayling was definitely part of how combined targets were developed.

**8. Correct me if I am wrong. STORM currently uses old MUSIC results to read off a graph simply read off '% impervious area' to 'required treatment area'? How is Trish looking to model flows in this? Do we now have a new continuous simulation tool... 'a MUSIC competitor'?**

There is a project underway (being led by DELWP) at the moment to do an upgrade of the STORM tool. Denise Corbet is the project lead. I don't think it has been decided exactly how it will model flows yet as it is early days for the upgrade.

**9. How do we get more information on the new incentives you just mentioned? Thanks**

The new incentives program is going to be launched in a couple of weeks. You can find out more by watching this space.

<https://www.melbournwater.com.au/community-and-education/apply-funding/incentives-program>

**10. The enviro-developer approach where reduction is expressed as a percentage may be a useful way of applying the healthy waterways targets. Would you consider switching to this approach for easier implementation in industry? The issue with the ML/ha targets is it**

**depends on a range of assumptions, so we have found that the target can in fact be higher than the total stormwater runoff in some areas (because imperviousness and rainfall assumptions are modelled differently).**

Yes it is worth further thinking about this. The graph is however just for the harvesting component and a separate one would be needed for the infiltration volumes. Either way there is a need to develop further modelling guidance for example when using MUSIC or some other tool so that there is consistency with different assumptions and modelling inputs.

**11. Did the review include the HWS Science?**

The draft Healthy Waterways Strategy was a foundational document used in the Science Review. The Science Review was completed in October 2018, close to the time that the Healthy Waterways Strategy was completed.

**12. "Has any effort being undertaken to engage the manufacturing industry, in order to understand how new science in manufactured devices can help achieve targets? It stands to reason that engaging manufacturers can help understand the potential engineering limits/opportunities to nutrient removal etc."**

EPA has not carried out this type of specific engagement. Consultation is expected to further illuminate current practices and opportunities. It is likely that knowledge and technology will continue to improve.

**13. Has any practical solutions been considered for reducing mean annual runoff, especially in areas where recycled water is mandated?**

Yes, we have looked at a range of potential practical solutions and created simple indicative infographics, one of which is a precinct scale solution (generally required where recycled water supplies non-potable demands at the lot scale). The infographics are expected to be made available with the draft guideline.

**14. If there's support for place-based assessments, shouldn't place-based contaminants be considered as well? Eg industrial and commercial sites (possibly) having more metal than nutrient pollutants?**

The general environmental duty (GED) is at the centre of the Environment Protection Act 2017 (intended to commence on 1 July 2021) and it applies to all Victorians. You must reduce the risk of harm from your activities:

- to human health and the environment
- from pollution or waste.

This means the approach to protection of human health and the environment has changed. The expectation is that you will manage your activities to avoid the risk of environmental damage. You must also respond if pollution does occur. As far as reasonably practicable, you must reduce your activities' levels of risk to human

health and the environment. Therefore, risks specific to a site must be minimised and managed.

<https://www.epa.vic.gov.au/for-business/new-laws-and-your-business/general-environmental-duty>

This means hazards must be assessed to determine how they could lead to harm, how severe that harm could be and how likely it is to happen. Risk assessment is a process for building knowledge and understanding of hazards and their associated risks so decisions can be made on how best to control them.

<https://www.epa.vic.gov.au/about-epa/publications/1695-1>

- 15. Does the update of BPEMG require every MW Drainage Scheme to be reviewed for the new volume targets? Do you envisage that there will be a \$ rate for the mean annual runoff target (like there currently is for TN)? Without a end use demand (which there not always is) it is very, very hard to meet volume targets.**

The guideline is focussed on new developments.

The guideline highlights that risks must be minimised so far as reasonably practicable: the guideline does not set compliance requirements.

- 16. How will the GDE interact with construction sites and their associated stormwater impacts?**

The GED requires all Victorians to manage risks to human health and the environment that their activities create. We are developing new and updated guidance in consultation with industry: the 'Civil construction, building and demolition guide' aims to contribute to your understanding of good environmental practice under new environment protection laws. It will provide information about new duties, how to identify risk, and control options you can put in place to manage risk. It will be released as an interim guide mid-2020 and later updated.

- 17. what are your thoughts on using a product GEOHex, as currently I'm trying to investigate the use of this material to direct water to garden beds and use it as a hard surface willed with gravel or lawn areas so some water is absorbed into ground before going in to pits. love to hear your thoughts on this product please...**

NA. We have no comments about specific products.

- 18. Does the GDE apply to private land?**

The GED requires all Victorians to manage risks to human health and the environment that their activities create. Everyone must take steps to prevent or minimise those risks. For businesses, this may include things like correctly managing waste or storing chemicals safely. For individuals, this may include things like making sure rubbish from your renovations goes to the correct place or keeping household chemicals out of stormwater drains.

The new Act distinguishes between corporate entities and individuals.

<https://www.epa.vic.gov.au/about-epa/laws/new-laws/a-clearer-penalty-structure-for-offenders>

<https://www.epa.vic.gov.au/for-business/new-laws-and-your-business/general-environmental-duty>

- 19. Are we including measures to emphasise / enforce the duty holder's \*responsibility\* to inform themselves? It's not sufficient to simply claim ignorance later to excuse wrongdoing.**

The GED requires you to have reasonable knowledge about the risks your activities pose, and how to address them. 'State of knowledge' is all the information you should reasonably know about managing your business's risks.

This includes information from:

EPA

your business

industry

government.

<https://www.epa.vic.gov.au/about-epa/laws/new-laws/state-of-knowledge-and-industry-guidance>

- 20. Can you please share the email address shown on the last slide to receive BPEM updates**  
[urbanstormwaterbpem@epa.vic.gov.au](mailto:urbanstormwaterbpem@epa.vic.gov.au)

- 21. Does it include natural wetlands on farmland?**

The guideline is about urban stormwater.

- 22. Do you consider its risky to get water from carpark overfloor to be treated in a swale that is part of a dog park or play space that is adjacent to a carpark, didn't think it was but if it is what are the ways we could get around this ? planting or through design ?**

Runoff from any particular area to another area would need to consider the risks associated. Activities which capture stormwater and treat it must consider any potential users of that space and the receiving environments.

- 23. We really need VPP to line up with BPEM and then DSS is important.**

A mixture of tools and approaches will be necessary to help improve stormwater management.

DELWP will consider if it's appropriate to update references in the VPPs with further analysis and consultation.

- 24. Can you please provide the link to the EPAs place where we can register to be kept informed?**

[urbanstormwaterbpem@epa.vic.gov.au](mailto:urbanstormwaterbpem@epa.vic.gov.au)

- 25. Is sediment quality a component in the SMG - eg metals levels in estuaries as an indicator for W/Q?**

An objective for sediment quality is not proposed to be included at this stage, but under the new environment protection laws intended to take effect July 2021, the

general environmental duty will require that anyone engaging in an activity that poses risk of harm to human health and the environment, from pollution or waste, must minimise those risks so far as reasonably practicable. Sediment quality can be assessed using standards in the Australian and NZ Government Guidelines (2018).

<https://www.epa.vic.gov.au/about-epa/publications/1695-1>