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Senate Standing Committees on Environment and Communications
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SENATE INQUIRY INTO STORMWATER RESOURCES IN AUSTRALIA

To whom it may concern,

Please find following my submission to the Senate Inquiry into Stormwater Resources in Australia.

I would be available to provide evidence to the Inquiry if requested.

2. The role of scientific advances in improving stormwater management outcomes and integrating these into policy at all levels of government to unlock the full suite of economic benefits.

Good public policy should be based on credible science. Stormwater science has rapidly evolved over the past decade to the point where there is strong evidence of positive impacts across multiple outcomes. There is a need to continue to look to greater integration of these within a systemic framework that involves a genuine consideration of economic benefits across a range of scales.

At present, each State has different policies regarding the capture and use of rainwater/Stormwater. Further, at a local authority level these policies have varying levels of application. *To fully realise the economic benefits of using Stormwater as a resource, the Federal government should set a lead in encouraging through policy or incentivising through rebates Stormwater harvesting schemes. These schemes could be similar in scale to the solar rebates on a household basis, or regional for a co-operative of industrial uses, as an example.*

3. The role of stormwater as a positive contributor to resilient and desirable communities into the future, including 'public good' and productivity outcomes.

The introduction of mandatory rainwater tanks in southeast Queensland had a significant economic benefit through the plumbing and poly tank industries in addition to relieving demand on the centralised water supply. Rainwater harvesting systems also assist with reducing the cost (footprint) of Stormwater quality (WSUD) treatment systems for developments by reducing the amount of runoff leaving each lot that must be treated and detained, for minimal cost to each house/unit/dwelling development.

SPEL has noticed since the removal of mandatory rainwater tanks in QLD a significant downturn in the above-mentioned industries. It is our view that the *Federal government should seek to incentivise rainwater tanks on all new dwellings/developments on a national scale.*

5. Model land use planning and building controls to maximise benefits and minimise impacts in both new and legacy situations.

For denser urban environments, living, **green roof installations** are an effective and proven technology to harness rainfall, reduce heat island effects, insulate buildings, and reduce energy costs for air conditioning. It is SPEL's view that **from a Federal level down, government should be promoting and incentivising these technologies into new developments, particularly in CBD re-developments. This could be through a rebate scheme with the industry suppliers, or a "stormwater tax credit" to businesses implementing these technologies similar to the R&D credits currently available to industry.**

There is ample studies and evidence that gross pollutants [plastic bottles and bags, litter, cans, cigarette butts etc] are getting worse and worse in Australia. This would be partly due to the fact that the stormwater industry has taken the focus off gross pollutants by accepting that vegetated assets capture gross pollutants when they simply do not!

A marine litter survey released in April 2014 announced that researchers have found human litter in all marine environments, from beaches to the most remote and deepest parts of the ocean, including the 4500 metre deep Cascais Canyon in Portugal...most of the deep sea remains unexplored by humans – but when we do get there we are shocked to find that our rubbish has got there before we have!

Because most litter makes it way to the worlds shared oceans and distant coastlines from land based stormdrains, litter solutions begin locally!

Victorian local govts have spent 77 million on litter according to the 2009/10 LG annual survey, **VIC cities have installed more than 4000 side entry and in line litter traps, and in one year captured 2,700 metric tonnes of litter from the stormdrains.**

We need Federal government policy that all stormwater pits in new developments be fitted with low cost gross pollutant traps/catch basin inserts.

6. Funding models and incentives to support strategic planning and investment in desirable stormwater management, including local prioritisation.

SPEL & Allied Pumps in Western Australia has worked with companies nationally and internationally which have spent years and millions of dollars in research into the most efficient ways to treat stormwater runoff to reduce pollutant loading to receiving water bodies. **The integration of conventional and innovative solutions have come to a point where treatment solutions are more efficient, more cost effective and more available. In Western Australia there is limited or no incentive for a building to include stormwater treatment because of the lack of local government stipulating its requirements.** On a daily basis architects and consultants are asked about incorporating treatment systems into the development and answer that there is no council requirement therefore the client will not spend the extra money. Typically these developments are \$5M and above.

In Queensland the State Govt funds the Healthy Waterways which funded research and the implementation of the **Healthy Waterways Guidelines Water by Design MUSIC Modelling Guidelines. This basically endorses in conjunction with the State Planning Policy the reduction of Gross Pollutants by 90%, Total Suspended Solids by 80%, Total Phosphorous by 60% and Total Nitrogen by 45%...**this is very slowly being implemented by some Councils in other states of Australia such as NSW, VIC and just very recently SA.

The Federal Government needs to implement policy that all Councils in all states of Australia implement these pollutant reductions targets.

Many of our towns and cities have historically been built on floodplains due to their proximity to water. Given the recent history of flooding in Brisbane, Gympie, the Lockyer Valley and the Hunter Valley, there is a need for the historical planning decisions to be re-evaluated in the light of ongoing resilience of these communities. This strategic planning may incur immediate costs but will be offset by the long term reduction of insurance claims and increase in public safety. It is our view that the Federal Government should be providing grants for these communities to identify planning solutions to ensure their long term sustainability and resilience against natural disasters.

There is a movement in local governments to collect money from developers instead of making the developer implement and maintain a stormwater treatment system, this is commonly referred to as Stormwater Offset [or Offsite] Schemes.

Ultimately the main problem with offsets schemes is that there is a **time lag with pollution generation to remedial treatment implementation**, and councils implementing smaller systems than what the developers accumulated treatment device sizes would be. Environment and industry is the loser and pollution is the winner.

- A developer is cost conscious and therefore efficient. Council is bureaucratic and cost inefficient. Offset price needs to be carefully pitched to account for the money lost in council seeking consulting and tender processes. Because council will ultimately only be able to afford to build smaller systems as it costs them more money than developers to implement projects. Environment will suffer with smaller treatment systems, this also results in less & smaller treatment systems installed so that the industry suffers financially as well.
- Consider this scenario, Council collect the offset money, the development goes ahead, and Council spends the money months/years later on a treatment system – in the meantime pollution is occurring and there is no treatment to counterbalance this pollution until council implements an adequate treatment system. Therefore, offsets should only accepted when Council has an immediate/parallel site to do the offset treatment. Offsets should not be accepted unless another site is identified. The developer could be conditioned to/encouraged to be involved in the alternative treatment site identification process as he is the one that is motivated. And the off site / offset treatment system should be implemented by the time the development is operational as if it was part of the offset development.

To date there is not one single Council [we know of Gladstone, Ipswich, Redlands, Logan, Toowoomba and Mackay] in Queensland who has collected money for stormwater offsets [they started to collect in 2012] that has implemented a treatment system!

- *Federal Govt needs to ban the use of stormwater offset schemes by councils as it is very damaging to the stormwater industry economics and the environment because the treatment is not occurring!*
- *In the international market other developed countries are increasing water quality and quantity measures not reducing them...Germany for example has a national rain tax which allows them to maintain their systems.*
- *The Federal Government needs to implement policy that all Councils in all states of Australia implement the 90% Gross pollutants, 80% TSS, 60% TP and 45% TN pollutant reductions targets.*

7. Asset management and operations to encourage efficient investments and longevity of benefit.

Vegetated Water Sensitive Urban Design (WSUD) assets including bioretention and constructed wetlands being constructed by property developers and handed over to local authorities, have been estimated in Southeast Queensland by Healthy Waterways to have a capital value of >\$500 million. **In discussions with local authorities, it is clear that they have no/limited maintenance budget for**

these WSUD assets, yet they are being implemented to achieve water quality targets and protect the environment. Without effective maintenance no asset will operate to its full capability, and vegetated assets are no different.

Local authorities across the east coast of Australia are, however, imposing maintenance agreements on private developments that include proprietary treatment technologies. **Local authorities are not requiring maintenance agreements for vegetated assets. This creates an anti-competitive imbalance in the market that favours vegetated assets. And whilst vegetated assets aren't maintained, they fail to meet the water quality objectives they were implemented to achieve. The environment is the ultimate loser.**

Further, the existing proprietary technologies that are presently in public-ownership are not being effectively maintained on a regular basis. In fact, Gold Coast City Council has been filling devices with concrete because it acknowledges that there is insufficient budget available to maintain them on a regular basis. This is a false economy, in that the pollutants that would have been captured, are being released into the waterways and ending up on the beach, where they must be collected mechanically - by a different department.

In the United States, the Clean Water Act (1972) is administered by the USEPA. This Act allows the USEPA to regulate discharges of pollutants into the surface waters of the United States. Under the Clean Water Act, the USEPA licenses and enforce water quality objectives (pollution control programs) on the local authorities. (<http://www2.epa.gov/compliance/clean-water-act-cwa-compliance-monitoring>) This also ensures that implemented technologies are monitored, maintained and function to achieve their permit criteria

The Federal government, and Environment departments should be setting clear national policies requiring the effective asset management and maintenance of both vegetated and proprietary Stormwater assets for both publicly- and privately-owned development to ensure effective environmental outcomes. Alternately, a Federal Clean Water Act similar to that implemented in the United States would also ensure environmental objectives used to require the implementation of WSUD assets are achieved through ongoing maintenance.

These policy and/or regulatory solutions will stimulate economic growth in the Stormwater maintenance industry that has struggled because they are predominantly hidden (underground) technologies that are not as visible as a pot-holed road pavement, a broken streetlight or an eroding beachfront. Yet their environmental benefits are significant.

8. The role of innovation in supporting desirable outcomes and transparent decision-making, including access to information and novel technologies for planning, design and implementation.

The Stormwater industry has a range of innovative measures available for its practitioners to use to improve water quality and manage increased water volume (detention). These measures initially arose from a regulatory environment requiring the capture and removal of gross pollutants (litter) from Port Phillip Bay, Victoria and Sydney Harbour, NSW. The EcoRecycle and Stormwater Trust NSW programs funded the introduction of many innovative proprietary designed and manufactured Stormwater treatment technologies across Australia.

This was then extended through the federal funding of the CRC for Catchment Hydrology and subsequently the eWater CRC. However, these research organisations focussed their efforts on constructed wetlands and bioretention systems for treating Stormwater quality and excluded

proprietary technologies. The development of the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) software effectively promotes the use of natural, vegetated assets (eg. constructed wetlands and bioretention systems), with many MUSIC guideline documents now excluding or cautioning against the use of proprietary technologies. The present regulatory “push” at the local authority level is for vegetated systems, because they have an aesthetic benefit even though they may not achieve the water quality objectives that they were implemented for.

Innovative Proprietary technologies are being excluded from the Stormwater treatment industry because there is a perception that their performance has not been sufficiently substantiated. This is despite the fact that many of the technologies have already passed rigorous testing overseas and have been accepted against international testing protocols. These proprietary devices have operated in Australia effectively over the past decade removing tonnes of litter and sediment that would have otherwise entered our waterways, harbours and beaches. This perception is stifling innovation, producing a “cookie-cutter” environment where bioretention systems are implemented simply to get projects approved, even though they will never operate effectively. Regulators are throwing the baby out with the bathwater.

To remedy this perception, Stormwater Australia has formulated a Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP) that is presently in a public consultation phase with comments and feedback to be incorporated into the document over coming weeks.

What the industry needs is leadership from the Federal Government encouraging the inclusion of proprietary Stormwater treatment technologies that have complied with the Stormwater Australia SQIDEP and/or demonstrate compliance with international protocols. Stormwater Australia also needs seed funding of ~\$1 million to implement the Australian SQIDEP process and bring it to a critical mass of engaged local authorities with ongoing sustaining membership of the process from the ground up. Or alternately, it needs a Federal Government department to manage and implement the process from the top down.

This SQIDEP process will result in new innovative products being brought to market, field testing (encouraging economic growth and create more jobs), closer industry-academia ties through independent review, and better environmental outcomes.

Summary

Stormwater is an important resource that is often overlooked and forgotten. As Australia’s cities continue to grow, stormwater quantity and quality issues will increase. Recent weather events might suggest that for the present period, it appears there is more Stormwater than required, Australian history indicates that drought is a regular feature. In fact, much of Queensland remains in drought even now. Our approach should be to prepare for drought when water is available, as well as promoting resilience against floods, and identifying the range of appropriate measures for improving stormwater quality such that this resource can be used to its fullest.

In SPEL’s view this can be achieved through;

- *Federal government policy encouraging stormwater/rainwater harvesting at all levels of government;*
- *Incentives/grants for stormwater harvesting schemes from a Federal fund of \$250 million;*
- *A Federal Clean Water Act monitoring and enforcing discharge quality, and encouraging effective asset maintenance by local authorities and private asset owners; and*
- *\$2 million seed funding for the Stormwater Australia SQIDEP process.*
- *Federal government policy that all stormwater pits in new developments be fitted with low cost gross pollutant traps/catch basin inserts*

- *Federal government funding and incentives for local govt [councils] to implement and maintain regional gross pollutant traps so we keep our water clean.*

Kind Regards,

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