



2019 IECA Australasian Conference and Stormwater Queensland Conference

Tuesday, 1st – Thursday, 3rd October 2019 | Hilton Cairns, QLD



Ocean Plastic – the pressures and solutions that (almost) no-one is talking about

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Biography:

Brad is Principal Environmental Engineer with Ocean Protect and has over 18 years engineering experience.

At Ocean Protect, Brad's role is to support the development and implementation of stormwater treatment technologies, asset management initiatives and community education programs aimed at helping to protect marine and waterway health.

Abstract:

A recent survey of 1,000 Australians nationwide demonstrated that the highest concern of all Australians with regards to population growth is marine and waterway health – ahead of housing density and traffic. The survey also found that almost six in ten (57 per cent) of Australians are not satisfied with the health and cleanliness of their waterways such as creeks, rivers, ocean. The amount of plastic in our oceans and waterways is a key and growing public concern, and it is predicted that there will be more plastic in the oceans than fish by 2050.

Ocean plastic has devastating consequences to marine life. Many marine organisms cannot distinguish common plastic items from food. Animals who eat plastic often starve because they cannot digest the plastic and it fills their stomachs, preventing them from eating real food. For example, approximately 80 percent of seabird species have plastic in their stomach, A recent study of juvenile sea turtles from around the planet also found plastic in the bellies and digestive systems in all of the 100 turtles studied.

The survey, however, also identified that Australians do not know what the largest source of this plastic pollution, with 'stormwater runoff' (the source of approximately 80% of marine plastic) thought to be a minor source. Within Australia, stormwater is also the primary cause of degradation in our urban waterways.

The impact of stormwater runoff within Australia is due to a combination of factors: (i) high pollution generation rates in urban areas; (ii) the vast majority of urban areas have no stormwater treatment systems; (iii) where stormwater treatment systems are integrated, these assets receive minimal (and often zero) maintenance (e.g. to remove accumulated material).

To mitigate the impact of stormwater runoff within Australian waterways (and the ocean), study authors propose a range of actions, including:

- Increased community awareness and education in relation to the primary source of ocean plastic (i.e. stormwater)
- Transition away from single use plastics, supported by appropriate education.
- Enforcement of Government legislation requiring appropriate evaluation, monitoring and maintenance of stormwater control measures (and associated reporting)



**RUNOFF, REEF,
REGULATION...**
and reality checks

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- “Zero trash to ocean” targets established across Australia, requiring (as a minimum) full capture devices for all urban areas to capture all particles less than or equal to 5mm in diameter during a typical storm.
- appropriate funding to facilitate the aforementioned recommended actions via an appropriate ‘ocean protection levy’ (or similar).