F5.1 Understand the impact of litter, including microplastics, on the social and ecological values of waterways and bays

Background

Litter is often the most visible pollutant in the environment and there is a growing awareness of the prevalence and magnitude of litter and the associated environmental, social and economic costs. This is paralleled by an increase in the number and scope of litter monitoring programs. The objectives of these programs are quite diverse with organisations variously targeting increased public awareness, better understanding of the risks and impacts of litter, and of litter sources and sinks to support improved management and cleaner waterways and bays. The variety in purposes is matched by a diversity in operational structures of monitoring programs. These different approaches have led to inconsistent data across regions or time-scales, limiting the ability for comparisons across studies. Standardised guidelines for litter monitoring and assessment in waterways and on beaches are needed to enable comprehensive analyses of the nature and sources of litter, how these vary spatially and temporally and in response to different management interventions.

Approach

This project aims to:

- Through stakeholder workshops, identify the purposes for litter monitoring and assessment in waterways and bays throughout the greater Melbourne region
- Undertake a review of current litter monitoring and assessment methods for aquatic environments
- Conduct field trials to compare the efficiency and effectiveness of candidate waterway litter monitoring methods
- Develop standardised guidelines for conducting litter assessments to support Melbourne Water (MW) activities to manage litter along waterways.

Progress to date

A litter workshop involving a broad range of stakeholders was held in 2019 to identify current litter monitoring programs and purposes for collecting litter information. A literature review of litter monitoring program questions and methods has also been completed. Case studies will be implemented in 2020, to assess the suitability of different litter survey methods in waterways for Melbourne Waters' litter monitoring and assessment purposes.

Expected Outcomes

- Management tools and a framework to assist MW in meeting Healthy Waterway Strategy objectives to effectively assess volumes and sources of litter, and manage the impacts of litter on waterways
- Improve the amenity, community connection and recreational value of waterways and wetlands
- Propose a standardised method for litter data collection that facilitates effective storage and reporting of litter data between stakeholders across the greater Melbourne region

Project Team

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A3P Aquatic Pollution Prevention Partnership

Melbourne Water

A collaborative research partnership delivering practical management solutions to reduce pollution in our waterways.